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METROPOLITAN AND PROVINCIAL.

BRISTOL ROYAL INFIRMARY.

CASES OF STRANGULATED HERNIA REQUIRING OPERATION.

By AUGUSTIN PRICHARD, Esq., Surgeon to the Infirmary.

IT is a frequent saying of the older hospital surgeons much accustomed to operations, that no hernia case is like its predecessor, and that something new turns up at each successive operation; and that these remarks are true, the following cases will tend to prove. They are all upon which it has been my lot to operate during the last twelve months; and all but one were in the wards of the Bristol Royal Infirmary. They are of interest, not only on account of their varied nature, but because some of the accidental symptoms which occurred in their progress were of the rarer kind.

CASE I. *Large Irreducible Femoral Hernia, with Symptoms of Strangulation: Ulceration of the Sac, and Operation: Recovery.* M. W., aged between 45 and 50, was admitted under my care on the 21st of August of last year. She had been the subject of rupture for twenty years; and eight years ago was operated upon for strangulated hernia by a surgeon in the neighbourhood of Bristol. The swelling has since that time been large and irreducible.

On Monday, August 18th, she was coughing, and the tumour increased in size, and a hole appeared on the outer part, from which fluid oozed; and in the course of a day or two, a large quantity flowed out. This was evidently from the sac which had given way.

Upon admission, there was a large irregularly lobulated oval tumour extending completely across the upper part of the right thigh, down to the edge of the labium, and considerably overlapping Poupart's ligament. It was very tender, but not very tense; while the abdomen was both tense and painful. She had frequently vomited, and her bowels had been confined since Monday. She stated that she had passed flatus *per anum* once since that time. Her pulse was low and weak.

I operated, under chloroform, about 9 P.M. (two and a half hours after her admission), and laid open about three-fourths of an inch of the tumour from the opening where the sac and integuments had given way, and introduced my finger. The sac was fully distended with small intestine, apparently healthy. The opening into the abdominal cavity was free; and as the patient was very weak and sinking, and it did not appear safe to lay open the sac thoroughly, I brought the wound together, and sent her to bed.

In the night she was much worse; collapsed, and weak, and vomiting; and the next day (22nd), as the symptoms were very urgent, I determined to examine further, to find out if there was any strangulation below. I therefore made two incisions into the sac, one above and the other below, and introduced my finger freely to the lower part, and found the intestines much glued together by recent peritonitis. After separating them considerably, I sent her back again to bed, without much hope of her recovery. I ordered her a pill, containing half a grain of opium, one grain of calomel, and two of blue pill, every two hours.

In the evening I found her rather better, having passed flatus *per anum*, by which she was relieved. She had also slept.

August 23rd. She passed a good night. The tumour was very tense, measuring *fifteen inches* in its largest diameter (*i.e.*, horizontally), and *eight inches and a half* across (*i.e.*, vertically). The integuments were inflamed. I ordered her to have an injection of warm water, and to take a pill every four hours.

August 24th. The vomiting returned. The tumour became very tense and red, with tympanitis. In the evening the bowels were moved three or four times, relieving the pain and tension. An opiate draught was ordered to be taken twice a day.

Diarrhœa set in next day, and was checked chiefly by opiates. She had a little wine, but had no appetite for food. The sac suppurated and began to discharge freely on August 28th; and on the 1st of September she began to take food. From this time she gradually mended, and was discharged cured, with a bag truss contrived by two of my pupils under my direction. It was made of a mould of gutta percha fitting to the tumour (which, of course, remained irreducible), and lined with lint, kept in its place by means of elastic webbing from the four corners, the two lower passing round the upper part of the thigh, and the two upper round the pelvis. By this contrivance, constant tolerably firm and equable pressure was made on the tumour, and it was protected by the gutta percha from external injury.

REMARKS. The large size of the tumour in this case added greatly to the danger; for if I had, according to the old fashioned method, laid open the entire sac, it would undoubtedly have proved fatal; and although I divided no stricture, I believe that, by separating the adhesions by the finger in the second operation, the obstruction to the canal was removed, and the patient placed in a better position with a view to recovery. The calomel and opium pill was of decided service.

CASE II. *Inguinal Hernia: Operation on the Third Day of Strangulation: Death with Symptoms of Pyæmia.* A. B., a rustic labourer, aged 65 years, was admitted under my care on Saturday, December 6th, about 3 P.M. He had been a free liver, and had been for some years the subject of rupture. The swelling had been down since Thursday, December 4th, and was larger than it ever was before. It was very tense and hard, and he had vomiting, with great abdominal tenderness. The hernia was in the left groin, but he was also the subject of a ventral hernia in the upper part of the abdomen, and of inguinal hernia of the right side, as well as of stricture of the urethra.*

In performing the operation under chloroform, after making a fair trial of the taxis, I came down upon something like a sac, containing a vermiform appendage, which proved to be a cyst upon the true hernial sac. The latter contained but little fluid, and about five inches of intestine, not very dark in hue. The stricture was very tight. After dividing the outer ring upwards, I experienced much difficulty in returning the intestine, and was obliged to make a further division of the stricture before I could get it all back. During the manipulations, a small rent was made in the peritoneal covering of the intestine.

In the evening after the operation, he appeared much in the same state, without any signs of rallying: the pulse was intermittent and weak, and he had vomited. The treatment consisted of opiates and stimulants. In this way he went on for three days, without any perceptible rallying of his powers; the scrotum became very dark, and infiltrated with blood, and he died on the 9th; *i. e.*, on the fourth day after his admission. His symptoms before death were those usually seen in pyæmia, with uninterrupted failing of all his powers.

At the *post mortem* examination (at which I was not able to be present), nothing very distinctive was discovered. There was imperfect suppuration about the spermatic cord and scrotum, but no extravasation of blood was found in the abdomen

* Many years ago, during my apprenticeship, I assisted my friend Mr. Morgan in a *post mortem* examination of an old gentleman (formerly a truss-maker in this city), and he was also the subject of three hernia, which were not immediately connected with his death.

or about the wound. The intestine appeared to have recovered itself.

Case III. *Femoral Hernia; very tightly strangulated: Formation of Artificial Anus on the Eighth Day: Recovery.* D. F., aged 45, was admitted in the evening of January 17th of this year, suffering from strangulated hernia on the right side. She had been the subject of rupture for many years, but never wore a truss. It had been down for twenty-four hours, and some efforts at reduction had been made. The tumour was hard and tense and painful; she had vomited, and the abdomen was tender.

I applied ice for an hour, then gave her chloroform, and tried the taxis, but that having failed, I operated. There was no difficulty of any kind about the operation, which was straightforward in every respect. I could find no aperture under the ligament which would enable me to divide the stricture without opening the sac, and when this was done, I had considerable difficulty in finding any crevice through which a blunt curved director could be passed. After a little time, I succeeded in dividing the edge of Poupart's ligament with a probe-pointed bistoury, and returned the intestine immediately. The gut was excessively black, but firm in texture and shining on its surface. The wound was brought together with two sutures and a compress, and when she awoke from the chloroform, she said that she was easier.

January 18th. She was going on well. The abdomen was tender and the skin hot, but she slept and had passed flatus *per anum*.

January 19th. She was better, but complained of heartburn and pain in the stomach, for which a little alkaline medicine was ordered. In the evening, she was feverish, and I ordered her a grain of calomel with a quarter of a grain of opium every three hours.

January 20th. The bowels had been open, and she was better, but from this date until January 23rd she was very feverish and low, and I ordered her some wine. The sac sloughed and projected at the wound, with some discharge of an excessively fœtid matter, some being of a yellow colour. The bowels had been moved.

January 24th. The yellow matter had much increased in quantity, and turned out to be fœcal; the flow of it from the wound was copious, and she felt better, but the bowels had not been moved in the ordinary way. She was ordered to take eight ounces of wine a day, and to have some eggs, and middle diet.

January 31st. During the past week she had great fœcal discharge from the opening in the groin, but at this period I removed a slough from the wound, and the flow ceased for a time.

February 3rd. The flow returned, but on the 7th it ceased finally. The bowels were moved naturally on the 3rd (with the aid of castor oil).

February 10th. The wound was well.

When this patient got up she could not stand upright, owing to the dragging from the wound; but this gradually ceased, and she went out quite well, but within the last month I have heard that a swelling has appeared at the side of the scar of the wound left by the operation.

Remarks. The stricture was so tight that in twenty-four hours the intestine had not only become quite black, but it was so pinched that a small portion of the circumference lost its vitality and poured out the contents through a little opening fortunately circumscribed by adhesions, which healed spontaneously afterwards. At the time of the operation, after I had divided the stricture, and returned the intestine, the aperture was so small that it would barely admit my little finger. I cannot help thinking that the chance of recovery in this case would have been lessened if I had succeeded in my attempts to divide the stricture and return the intestine without opening the sac.

Case IV. *Strangulated Femoral Hernia: Intestine much damaged by previous Manipulations: Operation: Recovery.* Mrs. C., a healthy woman, of 60 years of age, and of good courage, who had not been the subject of rupture, was admitted under my care on March 25th of this year. The tumour appeared on March 23rd, and on the 24th, considerable efforts at reduction had been made, but without avail. The bowels had been slightly open, and she had vomited.

When she was admitted she was sick, and the abdomen and tumour were painful on pressure. I tried the taxis, which failed, and then I operated. I tried in this case also to divide the stricture without opening the sac, but could not do it; I therefore opened it, and found in it some dark jelly-like substance, being the serum of the blood squeezed out and coagulated. The intestine was very black, collapsed and ragged on the surface. The stricture was unusually tight, but gave way at once on the application of the bistoury, and the intestine went back.

In the evening, she complained of great pain, and there was a large flow of serum from the abdominal cavity. Pulse 140. She was ordered to take three grains of calomel and ten of Dover's powder at once, and to repeat the dose on the following morning.

March 26th. Pulse 150; tongue dry. She was still vomiting. I therefore ordered her two ounces of wine with ice, and found that after a few hours she felt better, and the pulse sank to 120, and her tongue became moist. The abdomen was very tender.

March 27th. She was better; but the abdomen was much distended and tender; the wound was in a healing way. Considering that she had some low peritonitis, I ordered her a quarter of a grain of opium and three grains of blue pill every four hours, with four ounces of sherry wine daily, and under this treatment she gradually improved, with the only drawback of having great difficulty of passing urine, and distension of the abdomen on March 29th.

March 30th. Her pulse again became quiet, and her mouth a little sore from the blue pill, and she passed flatus *per anum*.

She then took the pills three times a day for a short time, and the bowels began to act in a natural way, her appetite returned, and in a few days she went out cured.

Remarks. The result of this case was very satisfactory, for the intestine was so damaged by the tightness of the stricture and my manipulations, that it was very doubtful whether it could recover itself, and it was a point of considerable importance to keep the canal quiet, and give the vessels of the strangulated part time to return to their usual functions. Although the patient required stimulus to keep her up, the relief from all the symptoms immediately, when the mercury showed its effect upon the mouth, was most marked.

Case V. *Femoral Hernia: Strangulation: Operation: Recovery.* Mrs. R., aged about 50, had been subject to rupture for some time, but had suffered but little inconvenience from it. It became strangulated on the 4th of April last, without any very urgent symptoms at first. Pressure was applied by the hand, and with a compress and bandage; and the tumour seemed to disappear. She was given a fair share of active purgative medicine, without any good effect.

I saw her on April 7th, and found a tumour in the left femoral region, which was very tender; the pain extended all over the abdomen, and she was constantly crying and vomiting, and was excessively prostrate.

I operated at once, without chloroform, and found no fluid in the sac. Some omentum occupied the anterior part of the cavity, and behind was a small knuckle of dark coloured intestine, of healthy consistency. I divided the stricture upwards and inwards, and the intestine slipped easily in. The omentum seemed hard and thickened by a long stay in the sac, and I therefore left it in the wound. The parts were brought together by two sutures and a bandage. She vomited once soon after the operation, but from that time went on well. The next day, diarrhœa set in, excited, in all probability, by the remedies taken before; but this was checked by suitable means, and she progressed rapidly and uninterruptedly, without any other untoward symptom, until she was well, which was in three weeks after the operation.

Remarks. This case requires no comment; it was straightforward and simple in every particular, according to the description given in our surgical and anatomical books—just such a case as one would like to fall in with for a first hernia operation.

Case VI. *Recent Femoral Hernia, from Accident: Strangulation: Operation: Sloughing of Sac: Recovery.* T. B., aged 60, employed as a farm-labourer in the last harvest, fell off a hayrick on July 9th. On July 10th he began to vomit, and he continued to do so until he was admitted, on the morning of the 13th. The swelling of the left groin was discovered two days after the injury. He had never been ruptured before, and his bowels had been slightly moved on the day before his admission. He was brought in an open cart twelve miles, and was much chilled and depressed. The tumour was very painful, and the integuments were red and œdematous, and his abdomen tender.

I operated at half-past five on the morning of July 13th, cutting down upon the tumour; for I was unable to pinch up the skin because of the œdema. When I had cut down to the

sac, some white thick matter oozed out, which appeared to be puriform matter in the cellular tissue outside the sac. The latter contained dark coloured serum, of the usual appearance; and only a small portion of the calibre of the intestine was engaged in the opening. The protruded part went back as soon as I had divided the lower edge of Poupart's ligament upwards. I had given him an ounce of brandy and thirty drops of Battley's sedative before the operation. He also took chloroform well, and knew nothing of what had been done to him afterwards, but said he was quite easy. He did not sleep after he was removed to bed; and I therefore ordered him ten grains of Dover's powder with four of calomel; and, in the evening, his tongue was moist, but the abdomen was tender, and he had retention of urine, requiring the use of the catheter. He was ordered an opiate draught at night, and a calomel and opium pill three times a day. The bandages were divided at night.

On the next day, he passed urine: the wound was much inflamed, and his abdomen very tender. The wound was ordered to be poulticed.

July 15th. He was very low and sinking, and was ordered to have four ounces of wine, which revived him before the evening.

The next day, by some casual omission, he did not get his wine, and at night was very low again. The bowels had not been moved, nor had any flatus escaped. He had great difficulty in passing urine. The abdomen was tumid and hard. I ordered him six ounces of wine daily, and to take two drachms of castor oil, with twenty minims of turpentine, at once.

July 17th. He was "five pounds better". In the afternoon, he passed flatus, with great relief; but there was no further action of the bowels. I therefore ordered the draught of castor oil and turpentine to be repeated.

July 18th. His bowels were gently open. The wound had been very unhealthy, and after poulticing the whole of the sac appeared to slough out, and by July 21st he was convalescent.*

Case vii. *Enormous Scrotal Hernia, of long standing; Symptoms of Acute Strangulation: Operation: Death in Eight Hours: with Air in the Veins.* G. D., aged about 35, a labouring man, had been subject to a large scrotal hernia of the right side for a long time. The tumour always came down by day, and went back at night; and he never wore a truss. On one occasion, it became much swollen, and there was great difficulty in returning it. This, however, was ultimately accomplished.

On August 11th, he was admitted under my care. It appeared that he had finished his work in the morning, and that his bowels were being moved, when the hernia suddenly came down to a large extent. I saw him a few hours after his admission, and found him with a tumour of the scrotum much larger than the head of a child at birth. It was very tense and very painful, and was dull on percussion at the neck, and clear at the prominent part of the tumour. His abdomen was also a little tender, but chiefly at the epigastrium. Cold had been applied for a few hours, but the tumour had become more tense. I tried the taxis fully, while he was under the influence of chloroform, holding the neck of the tumour in the proper position and direction with my two hands, while one of my colleagues maintained firm and steady pressure upon it, for it was too large and unwieldy for one pair of hands to manage. Finding it immovable (and there was not even the slightest impulse given to it when the man coughed), I punctured it with a grooved needle, and let off from the sac about two ounces of red fluid, and some little gas from the intestine; and then tried the taxis again, but to no purpose; and I therefore proceeded to operate.

When the sac was reached, and opened to the extent of about two and a half inches, some red serous fluid escaped, and the intestine presented itself, turgid, tense, and very black. At first it appeared to be the cæcum and ileum, but afterwards it became evident that small intestine only was contained in the hernia, and that it was all much distended with gas. I found that I could pass my forefinger at once through the ring and under the stricture; but the pressure was extremely hard, so as to make my finger ache. I could distinctly feel two hard rounded cords, one behind the other, pressing upon my finger; and these were the inner and outer abdominal rings, which had become parallel and opposite one another by the weight and constant pressure of an old and heavy hernia. These hard cords were firmly contracted, and felt like the round tendons of some of the muscles of the extremities. I divided the anterior cord, and made the opening freer, and tried to return the intestine, but in vain. So much of it occupied the scrotum that I could not get it back; and, after varied attempts for at least half an hour, I divided the margins of the ring more freely, and ultimately returned the whole. The mesentery was dark, as well as the intestine; and I could distinctly see points of extravasated blood in its substance. One small patch of peritoneum (rather larger, perhaps, than a fourpenny bit) was split away from the surface of the ileum. The intestine was thickened, and not very firm. After it was all reduced, I had the greatest difficulty in bringing the parts together, and keeping the intestine within the abdomen; but it was at last satisfactorily accomplished with a compress and bandage. The patient was under chloroform for an hour at least, and bore it well; for the pulse was pretty good, even at the end.

I ordered him an opiate draught; and, when I came down to see him at 8 the next morning, I was dismayed to find that he had died at 7. He had been seen by the house-surgeon at 2 A.M., when his breathing was hurried, and he had been sick; but his pulse was good, and he did not complain much. He was seen at 4 A.M. by the assistant house-surgeon, who, finding him lying round on his face and apparently asleep, did not disturb him.

Post Mortem Examination, at 4 P.M. (*i. e.*, about nine hours after death). The weather was very hot. The body was so swollen and disfigured that I could not recognise my patient of the night before. The face and neck were dark purple and tumid, crepitating under the fingers. He was also purple and green about the wound, and over the parietes of the abdomen and pelvis, and on the scrotum and penis. There was no blood in the abdominal cavity, but some little was extravasated among the muscles. The stricture at the rings had been entirely divided, and the opening was patulous. The intestines were removed; they were filled with gas, and the portion that had been strangulated was very distant from the rest, being almost black, thick, distended, and separated from the healthy intestine by a well marked constricted line. It was the ileum, and measured fully *two yards and a half* (all of which was quite black), reaching to within an inch of the ileo-cæcal valve. Blood was extravasated into the substance of the gut, and it appeared to be on the point of becoming gangrenous.

The only other remarkable fact connected with the *post mortem* examination was the *presence of air in the veins.* A large thyroid vein, the internal mammary, the iliacs, the vena cava, and the vena azygos, were distended with gas. The vena cava inferior, where it lies by the side of the aorta, looked like a piece of the small intestine of a child fully distended with air. Frothy blood was in the heart, an accumulation of air in the ends of the auricular appendages, froth in the spleen, in the cellular membrane, and in the integuments. The appearance of the corpse was that of a man drowned, or otherwise asphyxiated; and I believe that he died from the presence of air in his circulating system, but how it got there I cannot form any opinion. The intestine, after only twelve hours strangulation, was so damaged that he must certainly have died; but this condition of his veins was undoubtedly the immediate cause of death.

His pulse was good for some time after the operation, and he rallied well after the chloroform. He only took half an ounce.

Remarks. I am not aware whether there is any case on record where so great a length of intestine (nearly eight feet) was so thoroughly strangulated and disorganised in so short a period. There are three interesting cases of air in the veins (producing death) recorded by Mr. May of Reading, in the Journal of the present year (No. xxix), which much resemble that above described in some important particulars, and with which my case might be conveniently classed. Mr. May alludes in his paper to the records of many other similar instances, and adds the disagreeable fact that, in six deaths from chloroform, air has been found in the heart.

In the case which I have just narrated, the operation was urgently required to give the patient a chance of his life; and he died from the presence of air in the veins, but whether caused by the prolonged operation, or by the chloroform, or the damage produced by the disease, I am quite at a loss to determine.

* I have since heard, in a casual way, that his hernia had reappeared, and that his condition now (about three months after the operation) is very precarious.

ST. GEORGE'S HOSPITAL.

I. ENCEPHALOID TUMOUR, INVOLVING THE HEART AND LUNGS.

Under the care of H. A. Pitman, M.D.

[*Communicated by* G. G. Rogers, M.D., *Medical Registrar.*]

T. B., aged 23, formerly an army pensioner, but latterly employed as a day labourer, was admitted September 16th, under the care of Dr. Pitman. He was a stout, well made young man, of florid complexion and generally healthy appearance, and had never noticed anything wrong about himself until the end of last March, when cough came on, without any assignable cause, accompanied by pain in the right side, for which he was cupped, and thus relieved. About the same time, he one day observed a small lump at the upper part of the sternum, on its right side; and this gradually increased until, at the date of his admission, it was as large as a pigeon's egg. Twice he spat a little blood. For a week he had lost his voice, and had experienced difficulty in swallowing; his breath was also short. The bowels were costive; tongue furred; urine healthy; and he perspired profusely at night. His cough was harassing, and he expectorated frothy mucus. He was ordered a dose of calomel and senna, and nitric draught, with henbane and nitric ether, three times a day; and a belladonna plaster was applied to the tumour.

September 17th. His pulse was full and bounding, but rather unequal in the force of the successive beats in the right wrist. There was increased dyspnœa, for the relief of which he was cupped between the shoulders to ten ounces. The dysphagia, however, remained. The urine passed this day was high coloured and full of lithates. On examining the tumour at the upper part of the chest, it was found to pulsate strongly, and over it a systolic *bruit* could be heard synchronous with one at the base of the heart; but, after repeated examination, no aneurismal whirr was detected.

September 19th. There was less pulsation of the tumours. He slept better, and the perspiration was not so profuse. At times there was a degree of lividity about the features, occurring especially after a paroxysm of coughing. Sinapisms were applied for the relief of the breathing, and he took oxymel of squill alone.

September 21st. The cough was worse. He passed a restless night, and complained of pain in the chest at its central part. His pulse got weaker, and he became much exhausted from loss of sleep. The same auscultatory sounds were to be heard over the tumour. At the back of the lungs, the breathing was tolerably clear. No irregularity of the pupils was observed by any one who saw the patient. Morphia at night relieved his pain and cough.

September 28th. He spoke of feeling more comfortable. He remained so for three days, and then complained of renewed pain and dyspnœa, especially in the early morning. But the uneasiness was referred to the interior of the chest: in or about the tumour itself there was no pain.

October 5th. He had great difficulty in swallowing solid food. He was ordered to have arrowroot, eggs, and beef-tea. He generally sat at the table in the centre of the ward, or on the edge of his bed, with his left elbow on his knee, his head inclining to the left, and leaning on the corresponding hand; and in this position he appeared to breathe more easily.

October 7th. He had more cough, and sharp pain in the left side, for which he was dry cupped. The right pulse was 108, and intermittent.

October 9th. The pain had left him, although the cough continued severe.

October 10th. Increased dyspnœa came on towards evening; and his face, neck, and chest, were suffused with a deep red colour. At 10 P.M., after an attack of coughing, he expired; at the last turning to a pallid hue, as remarkable as the previous rubescence.

At the *post mortem* examination, forty hours later, on reflecting the skin from the tumour in the neighbourhood of the right sterno-clavicular articulation, the fibres of the pectoral muscle were found expanded over it; and, by dissecting these off, the surface of a mass of malignant matter was exposed. This lay, for the most part, in one mass, concealing the bones; but there was a separate tubercle lying on the sternum close below the large tumour. On section, it was seen that the sternum in many places had been completely absorbed. The portions of bone left, when cut through, appeared, on first sight, to be parts of the ribs, so exactly did they correspond in shape, size, and situation, to the second and third ribs. The intercostal muscles in the first two intercostal spaces were infiltrated with the disease, but not equally; those in the lower space being only partially affected, and that on their deep surface. From this circumstance, and from the peculiar manner in which the sternum had been eroded, it was clear that the external portion of the tumour was of later formation. On tracing it into the interior of the chest, it was found filling up the anterior mediastinum entirely, and extending far into the upper part of both lungs, and into the heart. As to the lungs, it is sufficient to remark, that the greater portion of their upper lobes was infiltrated with cancerous deposit, so as to leave no trace of the natural structure; and was thus adherent to the neighbouring parts, viz., to the portion of tumour which projected out of the thorax on one side, and to the base of the heart on the other. The remaining portions of the lungs were congested, non-adherent, and otherwise healthy. The disease had affected chiefly the right side of the heart, numerous scattered tubercles being found in various parts of the muscular walls, principally on their surface; and the pericardium was adherent throughout. At the lower part of the right ventricle was a mass of malignant matter, as large as a walnut, which occupied the whole thickness of the wall of the heart. The tricuspid valve was also much interfered with by a deposition of similar malignant disease around more than half of its circumference. This deposit served to keep the orifice patulous, and probably hindered the complete closure of the valve. The walls of the left ventricle were healthy, except for the presence of one or two small tubercles; and the auricles were unaffected, as also were the mitral and arterial valve-flaps. The pulmonary artery and aorta ran completely through the mass, but seemed quite exempt from the disease. The large branches of the aorta were displaced backwards by the tumour, but appeared perfectly healthy. The trachea lay in a groove on the back of the tumour, and was pressed considerably backwards.

II. ANEURISM OF THE ARCH OF THE AORTA: PHTHISIS.

Under the care of H. A. Pitman, M.D.

[*Communicated by* G. G. Rogers, M.D., *Medical Registrar.*]

W. J., aged 30, a potman living in Knightsbridge, came under Dr. Pitman's care on September 16th. His habits were intemperate, but he had generally been healthy, and able to do a fair day's work. His health began to fail ten months ago, when, after repeated exposures to cold, cough settled upon him, and he became an in-patient of Brompton Hospital from April until August. After being under treatment four months, one of his medical attendants observed a projection close to the sternum, and immediately below the right clavicle. It was painless, and on placing the hand over it pulsation was felt. Gradually it increased in size; and when he came under our notice it was about as large as a pigeon's egg. An indistinct blowing murmur was heard on its distal side. The man was emaciated, perspired at night, and expectorated nummular sputa. The bowels were open, tongue furred, urine clear, slightly phosphatic, and free from albumen. In the right wrist the pulse was scarcely perceptible. For the first two or three days he complained of pain quite at the lower part of the chest; this left him, and he continued much the same for a week, except that he got more anæmic. A belladonna plaster was placed on the tumour, and nitre draught with a little tincture of opium was given every six hours, and morphia at bedtime. September 25th, he had a smart attack of dyspnœa, and the cough was worse. He slept pretty well at night, but throughout the 26th was much distressed in his breathing, and was obliged to sit up, leaning forward on a bed-table. Severe orthopnœa occurred on October 2nd, and in a similar paroxysm he sank on October 4th.

The body was examined thirty hours after death. A hollow could be felt in the sternum on the right side near its articulation with the clavicle, but there was *no appearance of a tumour.*

On reflecting the skin from the part above named, the pectoralis major was found infiltrated with serum; and on turning back the muscle it was discovered that the sac of an aneurism had been opened, and some loose clot was seen projecting through the hole in the bones. The aneurism was seated on the highest part of the arch of the aorta, and all the branches of the arch opened into it. With the artery it communicated by a very large opening, which, however, did not include the whole calibre of the vessel; and it was almost empty. Towards

the upper and back part, however, the sac was thickened by the deposition of a considerable quantity of laminated decolorised fibrin, closely adherent to it; and the general cavity of the aneurism contained a small quantity of loose coagulum. The whole tumour was as large as an average sized man's fist, and the opening in the bones was some way down its anterior surface. There was a wavy yellow line at its mouth, apparently indicating the cessation of the internal coats of the vessel, but the sac was lined by a membrane exactly resembling the serous coat, and had not been ruptured anywhere; for even at the hole in the bones where it appeared imperfect the condensed pectoral muscle had formed a sort of false sac, and prevented the effusion of blood into the cellular tissue. The aorta was atheromatous, but the large arteries springing from it were unaffected. The heart was healthy. The lungs contained scattered tubercles, and were congested. The bronchi were full of purulent fluid. Where the aneurism had pressed against the lower part of the trachea the lining membrane of the tube was deeply congested. The other organs were congested, but otherwise healthy.

Remarks. The difficulties usually experienced by the physician in diagnosing between intrathoracic tumours and aneurisms, appeared comparatively few in the first of the two cases related above. The patient was free from the cachexia ordinarily attending malignant disease, and a tumour was found pulsating in a situation which would justly lead one to suspect aneurism of the arch of the aorta, or of the innominate artery. I believe Dr. Holland, somewhere in the *Dublin Quarterly Journal of Medical Science*, from an examination of many recorded cases, decides that aneurism of the innominate may be distinguished from that of the aorta by the almost uniform appearance in the former case of a tumour to the right of the sternum, and in the latter case to the left. But although the aspect of the patient appeared to warrant our setting down his complaint as aneurism, it is now quite evident that, by his healthy look, the obstacles to correct diagnosis were multiplied tenfold, and the case affords a most valuable illustration of disease simulating thoracic aneurism. Did the limits of this paper allow, I could bring forward several instances of encephaloid disease involving, to a large extent, the thoracic organs, and remaining undetected until the autopsy. I will, however, mention two only.

Case i. A pensioner, 67 years of age, and of intemperate habits, came into the hospital in January 1855, with supposed chronic bronchitis. He had only been ill seven weeks, and his previous health had always been excellent. There was general want of resonance in his chest, but not in any way marked, nor more in particular parts than others, nor more either than might be caused by loss of elasticity in the ribs. Moist and sonorous râles were heard everywhere; and some hypertrophy of the heart was believed to exist, but no murmur could be heard. Three days before death, drowsiness and confusion of thought came on, and great agony of dyspnœa. Nothing could induce him to remain in bed; and he sat on its edge till, exhaustion ensuing, he fell back and soon expired.

On examining the body the lungs were found of large size, one of them weighing 4 lb. 9 oz., and both were in about an equal degree occupied by encephaloid deposit, leaving but little texture not involved. The carcinomatous matter had not protruded through the pulmonary pleura, but it projected, in softened patches, into some of the bronchial tubes. There was also considerable lesion of the aortic valves.

Case ii. A married woman, twenty-six years of age, was in St. George's during October and November, 1855, with hæmaturia and Bright's disease. After being under treatment three weeks, paraplegia came on; she rapidly wasted, and sunk from exhaustion. No chest symptoms ever occurred. After death every organ, except the heart, was found to participate, more or less, in encephaloid disease. The lung tissue was invaded to a great depth. The same malignant deposit was found in the brain, the bones of the skull, the vertebræ, and the membranes of the spinal chord.

If, therefore, it is so difficult to certify to the presence of a malignant tumour in the thorax, unaccompanied by external signs, can it cause surprise that a healthy looking man, with a pulsating tumour in a suspicious situation, should have been thought to labour under aneurism, rather than to bear within his chest a huge mass of disease which had encroached, to a great extent, on the tissue of the respiratory organs? The wonder is, that the dyspnœa was not more severe for a longer period, and that such marked relief was obtained from depletion. In fact, the tranquil breathing which ensued after cupping was confirmatory of aneurismal affection, in which great benefit is produced by frequent moderate abstraction of blood. I know some will say that, in aneurism, the dysphagia caused by the tumour pressing on the œsophagus is relieved equally with the dyspnœa, and, in the case before us, this did not happen; but this one circumstance, *per se*, would not much influence the physician in forming his diagnosis; and I am sure that I have seen cases of undoubted aneurism where, after cupping, dyspnœa was relieved, but dysphagia remained, and *vice versâ*. The absence of aneurismal thrill proves nothing; and Dr. Stokes affirms, that "there are no peculiar or constant signs belonging to aneurism, by which sounds, produced in the tumour, can be distinguished from those of the heart:" and elsewhere he adds, that in aneurism of the arch or of the innominate, murmur even is frequently absent.

On the second case I hope at a future time to say something; at present, I shall only allude to the existence of tubercles in the lungs. Dr. Stokes says, that phthisis is the most common accompaniment of aneurism. Dr. Fuller, in two papers on Thoracic Aneurism, published in the *Medical Times and Gazette* of November 1856, ventures to call in question this statement. I have before me notes of fourteen cases which have come under notice in the medical wards since I have been registrar. Twelve of these died, and eleven were examined for tubercles; and only in the case now under consideration did phthisis exist. The other two patients left the hospital by their own desire: in neither had we any reason to suspect tubercular disease. These facts serve to corroborate the ideas which Dr. Fuller has laid before the profession.

ST. BARTHOLOMEW'S HOSPITAL.

I. REMOVAL OF SCIRRHOUS GLANDS NEAR THE BREAST: DEATH FROM PLEURISY.

[*From Notes by* E. Barker, Esq., *House-Surgeon.*]

A woman, aged 50, was admitted on October 12th, under the care of Mr. Paget, on account of scirrhous cancer recurring in the glands of the axilla and near the scar of an operation for scirrhous mammæ performed eighteen months before. The wound had soundly healed, and as there was no contraindication in the patient's health or general condition, it was resolved to attempt the extirpation of the disease. This was accordingly done on October 17th, when the remainder of the diseased tissue was removed.

Two days afterwards, constant hacking cough, with pain in the left thoracic region, came on; it was treated by expectorants, narcotics and cupping, but without benefit. On October 20th, mercury was prescribed and leeches were applied. Her strength, however, failed so rapidly, that it became necessary to give stimulants in large quantities, in spite of which she sank rapidly, and died on the 22nd.

At the *post mortem* examination, extensive pleurisy was discovered, depending apparently on secondary infection, as the wound did not involve the intercostal muscles, and thus had no communication with the pleura. The veins were not visibly affected.

Remarks. We have been induced to mention this case without going into details, just as a memento that amputations of the breast by the knife, though usually successful as operations, are not exempt from the risks of pyæmia and other diseases which follow more frequently on operations involving the bones. See also a case reported also from St. Bartholomews Hospital, at p. 473. Time will test the assertion of the Middlesex Hospital surgeons that the caustic treatment enjoys an almost complete immunity from these disastrous sequelæ. But, in the meantime, we may take exception to the tone in which they speak of the pain attendant on the use of the chloride of zinc by itself. Two cases are under treatment at this Hospital, of which we shall shortly, we hope, be in a position to give our readers the particulars, which prove that this application, though painful (and Dr. Fell's is not free from pain), is not by any means intolerable.

II. LOSS OF THE FOOT BY THE EXPLOSION OF AN OLD SHELL: RUSSIAN AMPUTATION AT THE ANKLE.

A singular accident which occurred to a young man, now an inmate of this Hospital, deserves a passing notice. He was a sailor, and had occasion a few months ago to visit Sebastopol. He was walking about smoking his pipe tranquilly amongst the many relics of the late contest, when a spark fell out of it on to

an old shell which lay at his feet, and which immediately exploded, shattering his left foot. The result is not very creditable to the countryman of Pirogoff who treated the case. Amputation was performed at the ankle-joint; but so little skin has been left (especially as the projecting extremities of the bones were not removed), that the tibia is only just covered, and by so irritable a cicatrix, that it will be necessary to repeat the amputation higher up.

III. DELIRIUM TREMENS IN THE FEMALE.

Delirium tremens in the female is sufficiently rare to make it worth while to produce short notes of an extremely virulent case, which seemed to run its course quite in defiance of the vigorous treatment adopted.

Mary S., aged 38, was admitted September 25th, on account of a wound produced by thrusting her hand through a pane of glass. The radial artery was wounded, and the forearm lacerated. She had been incessantly drunk for five weeks, her favourite liquor being rum; and she was still in a state of intoxication. Her countenance was pallid, pulse feeble, and she had lost a good deal of blood. The artery was tied. She was ordered beef tea and six ounces of rum. Three doses, each containing a drachm of tincture of opium, were given during that day, but no sleep was procured.

September 26th. She was ordered to have a drachm of antimonial wine in camphor mixture every three hours; but without benefit.

September 27th. The antimony was persisted in, and several large doses of tincture of opium were given. These amounted altogether to six and a half drachms in the course of the twenty-four hours, but still no sleep was procured.

September 28th. She was ordered half a grain of acetate of morphia, and a drachm of antimonial wine, every three hours. This seemed at first to allay her struggles, but in the later part of the day she became much more violent, and died fairly exhausted in the evening.

The *post mortem* examination showed only fatty disease of the liver.

BIRMINGHAM AND MIDLAND COUNTIES EYE INFIRMARY.

CASES OF CATARACT TREATED IN THE MONTH OF SEPTEMBER 1857.

Under the care of James Vose Solomon, Esq., F.R.C.S., one of the Surgeons to the Institution.

Case I. E. S., aged 50, a "bankswoman", had double cataract. Reclination was performed in both eyes, and on the same day. This operation was selected because there is chronic disease of the lids and conjunctiva. The commissures are much contracted. Inversion of the lashes of the upper lids and entropion of the lower ones had been remedied by an operation. For several days after the reclination, a free discharge of straw-coloured secretion was yielded by the conjunctivæ; so that, had a double extraction been performed, both eyes would assuredly have been lost, from want of union of the flaps.

Result. Good sight with both eyes; pupils central and round.

The sounds of the heart are natural.

Case II. J. B., aged 50, a boatman, had a hard cataract, which was extracted through an upper section in the left eye, without accident to the iris or vitreous humour. The left globe had been previously excised, because it was disorganised.

Result. Good sight; pupil central and round.

The heart's sounds are natural.

Case III. H. F., labourer, aged 71, intemperate, was admitted for cataract of the left eye. The *right* lens was reclined in 1856. The patient was at that time very feeble; and the vitreous body, from the appearance of the left eye, was believed to be unsound—a conjecture which proved correct. He reads large print.

In the *left* eye, the amber coloured nucleus of a lens, attached only at its upper border, moved backwards and forwards as on a hinge. The patient's health had much improved since last summer. Mr. Solomon, fearing that, after making the section of the cornea, the nucleus might sink deeply into the fluid vitreous, attempted with a needle to detach and dislocate it into the anterior chamber, previous to making the corneal incision. The attachment, however, proved too tough and too elastic to permit of this being done. After lodgment of the opaque body in the bottom of the front chamber, it ascended, on the withdrawal of the needle, to its old position in the pupil. The connecting membrane resembled capsule, and was speckled with white. A quarter section was made at the upper part of the cornea, through which the lens and some vitreous humour escaped. No accident occurred to the iris. The wound rapidly healed.

Result. Good sight. The pupil is drawn upwards, in consequence of the loss of vitreous humour. In this case, a hard lens had undergone (as a result, probably, of rupture of its capsule) absorption, with the exception of its highly dense centre.

The heart's sounds are healthy.

Case IV. R. T., aged 17, a metal-pickler, had the left eye amaurotic, the iris tremulous, and the pupil black, and not dilated. The right presented a soft cataract and a tremulous iris. The shadow of a finger, when passed before it, was recognised. Solution was performed. No inflammation followed.

Result. Not ascertained at present.

Case V. J. H., aged 28, a miner, had cataract of the left eye from a blow. "Linear extraction".

Result. Good sight; pupil central and round. Neither double or confused vision has been experienced.

Case VI. W. A., a porter, aged 72, had double cataracts. The capsule of the right lens was thickened, and of the colour of white paper. The left lens was extracted by the upper incision, without accident to the iris or vitreous humour. No operation was performed on the right.

Result. Good sight; pupil central and round.

The sounds of the heart are natural.

Case VII. J. S., a boatman, aged 62, had double cataract. In the left eye, the cataract is complicated by posterior internal disease. In the right eye, the anterior capsule was opaque; the iris dilated freely under atropine; and the pupil was round, although there were adhesions between the two membranes. It was a question whether the lens was present. Mr. Solomon thought it was not; but, not being quite sure, he passed a needle through the cornea to ascertain, determining to act afterwards according to circumstances. The lens was not present; the capsule was readily cut away from the iris, and removed through a small incision of the cornea. It contained some particles of earthy matter. Some fluid vitreous humour was lost. Acute inflammation of the eyeball followed.

Result. Useful sight. The pupil is quite round, except at its lower part, which forms an horizontal line instead of a curve. When the effects of the atropine have passed off, and *a few months have elapsed*, it will, if we may judge from what we have seen in other cases, assume its natural form.

Case VIII. J. C., a boatman, who said he had never had a day's illness in his life, and did not know what it was to have a headache, was affected with double cataract. The left eye is unsound; the sclerotic vessels are enlarged; the capsule evinces signs of past inflammation; and the pupil, of circular form, does not duly expand after the repeated application of atropine. There is a slight divergent strabismus. The shadow of a finger, passed before this eye, was recognised. The right eye had the appearance of health, with the exception besides the cataract, that here and there the pupillary margin of the iris was *minutely* jagged. The upper incision was accomplished in this eye without accident to the iris, but, in consequence of spasm of the straight muscles and a little "hanging" of the knife, which cut badly towards its heel, a fair quantity of vitreous escaped with the lens. For twenty-four hours all went well, and then acute inflammation was set up.

Result. Closure of the pupil, which is drawn upwards.

The heart-sounds are natural.

Case IX. J. F., a glass bead-maker, aged 49, intemperate in his early days, latterly in very poor circumstances, had double cataract, complicated by chronic congestion, if not inflammation, of the deep internal tissues. The right cataract is fluid, with the exception of an amber nucleus, which is plainly visible when the head is erect and directed a little forwards, and disappears when it is thrown backwards. The left appears to be of a soft consistence externally, and would probably, if not surgically interfered with, assume the same condition as was observed in its companion. In July, Mr. Solomon operated with a needle through the cornea on this eye. The external fibres of the lens were soft; the nucleus was hard. Inflammation, as anticipated, followed. In September, a mere concave shell of lens remained, from which a central round portion was cut out with a needle. There was no consecutive irritation.

Result. Good vision; a round pupil.
There is a loud cardiac *bruit.*

Case x. T. G., aged 62, a mechanical draughtsman, healthy, rather feeble, who had suffered a good deal of anxiety of late, had double cataract. The upper section was done in the right eye without accident to the iris or vitreous humour. The incision was slow in uniting, but not so much so as in Case xi—a younger and much stronger subject. No operation was performed on the left eye.

Result. Good sight. The pupil is central and round.
The sounds of the heart are natural.

Case xi. C. B., a nailer, aged 51, had double cataract. The capsule of the right lens was thickened and opaque. The left lens had a slightly greenish shade. The eyes are deep set, and the brows very large and prominent, which give a forbidding aspect to a countenance, which, in other respects, was not disagreeable. An operation for convergent strabismus was performed in 1856, in anticipation of the cataract treatment. Severe headaches preceded the dimness of sight. The lenticular disease is referred by the patient to a contusion of the eyes, from a thrust of a man's finger, about four years since. The lower incision was executed in both eyes, and on the same day, without accident to the iris or vitreous humour. From the toughness of the capsule, some difficulty was presented in the extraction of the right cataract, and a little vitreous humour escaped. No inflammatory pain followed. Union took place very slowly. Meat was given on the second day after the operation, and ale on the third. Although the patient was a younger and stronger man than T. G. (Case x), the repair of the wound was more tardy than in his case.

Result. Good sight in both eyes. The pupils are central and round; a very small pellet of capsule adheres to the lower margin of the right pupil.
The sounds of the heart are natural.

Case xii. L. R., aged 77, a female, has double cataract. The left is complicated by retinal disease. The right eye affords a good specimen, as in Case ix, of Morgagnian cataract. The anterior capsule is speckled, which gives the appearance of gruel to the cataract. When the head was turned back, the solid nucleus disappeared, and a general milkiness was substituted. Illness obliged the patient to leave the house before the adoption of any surgical proceeding.

Remarks. These cases present a very fair practical exposition of cataract as met with in the practice of a public institution. The number of patients submitted to surgical treatment was *eleven*, of eyes *thirteen*.

Nine of the latter were treated by extraction; *two* by reclination; *two* by solution. The upper incision was selected in *seven*, the lower *two*. In three patients, the fellow eye of that operated upon was obviously diseased in its deep seated tissues. In one of these, the diseased globe was excised, and an excellent recovery after the extraction of the cataract secured. In the others (two), acute sthenic inflammation followed.

Original Communications.

THE PHYSIOLOGY, PATHOLOGY, AND THERAPEUTICS OF THE MOTOR FUNCTIONS OF THE UTERUS.

By H. Hannotte Vernon, M.D., Physician to the Great Northern Hospital; formerly Resident-Accoucheur to St. Mary's Hospital.

[*Continued from page* 827.]

Part III.—Therapeutics.

Before attempting to lay down what I believe to be the true methods of treatment applicable to disordered states of the uterine motor functions, I will pass in review very briefly some particulars relative to the past history of this aspect of the medical art. In no department of medicine, perhaps, has there been a more marked revolution than in that part of it which relates to uterine therapeutics. And not only has there been one revolution, but there has been a second; and obstetricians have oscillated by turns between the wildest credulity as to the virtues of remedies, and the most dogged scepticism.

The very earliest practitioners of obstetricy had very simple ideas on the subject of labour, and as to the objects to be obtained by medication, manipulation, incantation, or prayers. The object of every therapeutic endeavour was to make labour *quick* and *easy*. As regards the part acted on, their idea was that medicines or applications of any kind were of three kinds; viz., such as brought the fœtus down, such as brought the secundines down, and such as brought down both. Now, if this could be done *quickly* and *easily*, then obstetricy had achieved its triumph. As regards the choice of means, the ancients were guided by whether the fœtus was alive or dead; the foundation of such difference in treatment being their belief that the fœtus was the main instrument in its own birth. They speak frequently of births being delayed by reason of the weakness of the fœtus, and evidently thought that it worked its way out just as a young crocodile would wriggle out of its shell. Had not the placenta been such an unmistakably anti-locomotive object, the obscure property of a "conatus ad partum" would doubtless have been attributed to it also. So great a share, indeed, did ancient physicians imagine the fœtus took in the process of its own birth, that they never thought of any means of assisting labour during the life of the fœtus, except such as were mechanical. The fœtus was looked upon as exercising a sort of *vis à tergo;* and if this was not sufficient, then it was to be supplemented by a *vis à fronte—i.e.*, by some mechanical appliance. Hippocrates, the old man of Cos, who, by the way, was a "general practitioner," gives an elaborate account of the drugs to be used to bring down a *dead* fœtus. He enumerates also the proper drugs for bringing away the placenta, as if the birth of these were a process essentially distinct from the fœtal birth, specifying for this purpose mugwort, dittany, castor, spikenard, rue, wine, flower of white violets, leaves of agnus castus, garlick, and small onions. Celsus was evidently under the same delusion as to the active part the fœtus takes in its own birth, for he confines his remarks to cases where the fœtus is dead; he says: "Si vero infans intus decessit, quo faciliùs dejiciatur, malicorium ex aquâ terendum, eoque utendum est." This curious opinion that the child worked its own way out of the maternal nidus, or at any rate assisted itself very much, although abandoned a long time ago as a formal doctrine, nevertheless continued to influence obstetrics up to a comparatively recent date. Thus in all the old herbals and obstetric books oxytocic remedies were arranged in three distinct categories, corresponding with the ancient idea mentioned before; viz., that the live fœtus, the dead fœtus, and the secundines had each some special properties of their own, which demanded different drugs for their expulsion respectively. And, indeed, so late as within eighty or ninety years of the period when Denman was at the zenith of his reputation, and within fifty years of Smellie's time, this ridiculous distinction as to the action of oxytocics was kept up. Ignorance and credulity are constant associates; for we find that the animal and vegetable kingdom alike were ransacked, and multitudes of substances of the most innocent nature generously invested with the property of procuring "easie travell" or "speedy deliverance," or "bringing down the dead fœtus," or "expelling the secondine."

The nature of the remedies in vogue formerly, and the modes of applying them, are curious in the extreme. Poultices and unguents were perhaps the least objectionable appliances; but the favourite mode of proceeding seemed to be to cram an atrocious mass of wool and unguents up the vagina, or to force something still more execrable down the throat. Various kinds of excrement were recommended. Hippocrates gave "the dung of a hawk in wine." His successors gave the excrement of the horse, the goose, the vulture, and even human excrement. Schrœder is said to have given bugs. The secundine of various animals, to wit, the cat and the goat, is another of the pleasant medicaments used in the good old times. Powder of earth-worms, to the extent of a ℈i or ℈ii, also figures as an important remedy. The powder of horse's testicles, the gall of the scorpion fish, the liver of the cormorant, the flesh of the weasel, and burnt horse's fat, with eel-powts, toads, and newts, complete the list of animal abominations. The list of vegetable oxytocics, though much more copious, is decidedly cleaner. Some of them attained to such reputation as to be popularly named according to their real or supposed virtues; thus the aristolochia was called birthwort; and one of the species of horehound went by the name of motherwort. Some of the most remarkable were such as we believe at the present day to possess some control over the contractions of the uterus. Thus savine and cinnamon are mentioned in all the old herbals as used for this purpose. A very interesting paper by Mr.

Howship Dickinson appeared in the *Medico-Chirurgical Transactions* of last year, the object of which was to show that digitalis possessed the power of inciting the uterus to contract. But the diligence of our forefathers had included foxglove amongst the helps to labour two hundred and fifty years ago. If we even turn to the only mineral oxytocic known, viz., borax, we find that it was an ingredient of the "pulvis ad partum" of the Edinburgh pharmacopœia of 1699. And Dr. Salmon gives pretty nearly the same formula as the "pulvis ad partum" in his curious dispensatory, and says "it is a great secret for this purpose; and if you add round birthwort root, myrrh, bryony root, and inspissate juice of savine, the medicine will be much the stronger." Oil of amber was formerly extolled as an oxytocic, and entered into the composition of both the above mentioned powders. Then there were some celebrated pills called "Scheffer's uterine pills"; they were composed of hiera-picra, asarabacca, gentian, birthwort, elecampane, myrrh, dittany, madder, saffron, and syrup of mugwort. All these herbs and scores of others are confidently spoken of in the old herbals as of undoubted potency. One authority went so far as to say, that the cyclamen or sow-bread acted so powerfully on the uterus that it was not safe for a pregnant woman to go near it. He took the precaution of setting up sticks in his garden wherever it grew, with notices to breeding women not to touch or remain near the herb. Should pregnant women incautiously walk over it, he averred that they would surely abort or fall in labour directly. A Flemish physician, by name Dr. Francis Rapard, claimed nearly equal virtues for the common columbine; he administered the powdered seeds. In addition to those I have specially mentioned above, the following appear to be the agents most probably possessed of some real oxytocic powers, which were used by our forefathers; aloes, flower de luce, cummin seed, galbanum, lavender, mistletoe, rue, sage, tormentil, darnell, laburnum, dittander, colocynth, hippoglossum, male fern, angelica, imperatoria or masterwort, anagallis aquatica, polygala senega, and the various products of the pine and fir trees, such as tar and turpentine.

It is curious to observe how servilely the different compilers seem to have copied from their predecessors. The virtues of different herbs are described in almost the same words in book after book. Turner's *Herbal*, published in 1551, mentions so many plants which "help the birth," that one would almost fancy the vegetable kingdom had been created one monstrous repertorium of obstetric simples. The same is true of Andrew Boord's *Breviary of Health*, published in 1575; the same of that of Dodoens, published in 1619. Johnson's *Herbal*, published in 1633, repeats the same things, and adds some curious tales; but the most wonderful work of all is that of "William Langham, Practitioner in Physic," published also in 1633. He enumerates and describes the virtues at length of 48 herbs which will surely expel a dead child; 56 which guarantee "easy deliverance"; 90 good for "women in travell"; and, to turn to analogous remedies, the astounding number of 108 infallible emmenagogues.

This farrago of simples and other uterine remedies, however, disappeared from medical practice very rapidly after about the year 1700. In the second edition of Smellie's *Midwifery*, published in 1752, he says, when speaking of the treatment of lingering labour: "But if she (*i.e.*, the woman) is not to be satisfied, and strongly impressed with an opinion that certain medicines might be administered to hasten delivery, it will be convenient to prescribe some innocent medicine that she may take between whiles, to beguile the time, and please her imagination." Stimulants, depletion, and moral influences seemed to be all that Smellie could rely upon in lingering labours, apart from manual interference. His faith in oxytocics was evidently very small; and when he gave medicine it was confessedly only as a *placebo*.

About forty years later Denman writes thus: "It is perhaps beyond the influence of any earthly power to give to the uterus its native or genuine disposition to act, to add to its power, or in any material degree to increase its energy, though many applications and medicines have been recommended and tried for this purpose. Human art may put or preserve the constitution in a state fitted for such action, or it may remove any impediments to its effect; but the principle is wholly independent of the will of the patient, or the skill of the practitioner." This citation of Denman's opinion marks the extreme reaction from the credulity of the former century; it is a kind of obstetric Pyrrhonism, doubting everything. But this state of matters was not destined to last for any great length of time; for, eight years later than the edition of Denman I have quoted from, viz., in 1803, Herder made his experiments upon galvanism; and in 1807 Dr. Stearns, of New York, introduced the ergot of rye into the place in obstetric practice which it has held ever since.

We now come to modern oxytocics. The list has increased since Denman averred that no earthly power could materially increase the contractions of the uterus. A second reaction has set in, and we find ourselves making a reverse movement; not really retrograde, it is to be hoped, but only apparently so; for we have before us the warning examples of extreme credulity and extreme incredulity; and the light of an advanced physiology and pathology by which we may steer safely through the dangers of scepticism on one side, and too ready belief on the other.

It is, perhaps, the most encouraging circumstance in connection with modern therapeutics, that we are able to connect much of our treatment with the facts of physiology and pathology in a clear and rational manner. Even where treatment is of little avail, so far as it does actually work for good, we can, in a great many cases, trace the action of the therapeutical measures adopted to either the operation of their well ascertained physiological actions, or to a quasi-specific action, so well established and easily recognised, that, in spite of empiricism, we feel ourselves resting upon a safe basis. In the treatment, for instance, of traumatic inflammations of all kinds, of acute rheumatism, of scurvy, or of ague, we are able to connect our ratio medendi either with a series of well known facts in physiology, or with some ultimate and empirical facts, either of which are abundantly satisfactory. And even where we can push our inquiries no further back, we appear in this day to have made up our minds to the acceptance of ultimate facts, a virtue which, to our forefathers, was quite unknown. When facts fail us, and our induction is imperfect, we do not now, so frequently as formerly, fall back upon some hypothesis or figment of the imagination to complete our philosophy, nor create for ourselves a delusive *chiar'oscuro* out of a jumble of facts and fictions. In obstetric medicine it is fortunately our privilege to be able to draw the connection between science and art very close. Hardly any treatment of aberrant forms of uterine motor action are insusceptible of an explanation by a reference to physiology; and the therapeutics of such morbid states are generally to be found as clearly and closely related to physiology as the pathology itself. If this really be so, then it may be asked to what purpose is it that we are vexed with the reiteration of what is already known? My answer is, that in the first place the facts pertaining to this subject have hitherto been lying scattered abroad to a certain extent; secondly, that although much is known in each separate department of hystero-dynamics, the correlation of the facts in each has never yet been thoroughly shown, or, indeed, attempted at all in a systematic manner; and, thirdly, I believe I have not merely displayed the facts and principles of the subject in an orderly manner, but have made a truer physiological analysis of labour than any yet extant, given a more copious account of the pathological facts than has hitherto been done, and added something to the therapeutical knowledge we possess in this department of obstetricy.

It will be remembered that in the physiological analysis of labour, five elements were specified as the anatomical constituents, whose functions taken together are parturition. To speak briefly, they may be mentioned as—

1. Peripherical arrangements of cerebro-spinal and sympathetic nerves.
2. Incident cerebro-spinal and sympathetic nerve-fibres.
3. Nervous centres, both cerebro-spinal and sympathetic.
4. Efferent cerebro-spinal and sympathetic nerve-fibres.
5. The uterine muscle and other muscles.

In the pathological investigation it may be remembered that, to a great extent, the *second* and *fourth* of these elements were eliminated, as not being of primary importance in a pathological point of view. The same is true as regards the therapeutics of morbid uterine motor action, as a necessary sequence. I shall, therefore, treat of the therapeutics of morbid uterine motor action in three sections, each corresponding to those physiological elements and pathological developments which are of primary importance. Thus, in relation with peripherical arrangements of nerve, of certain natural capacities, are a variety of morbid states, consisting of alterations in the manner and degrees in which such endowments are manifested; and we consequently look for means of cure specially adapted to these aberrations. The nervous centres again have their normal actions, and their abnormal, both of which have been traced, guided by the same thread; and these latter have their own

therapeutical indications. And the uterus again has a physiological condition of its textures, as well as a diseased, and we seek for a means of either restoring its natural condition, or obviating the ill effects which may possibly accrue from its failure.

It will naturally follow, then, to arrange the therapeutics of the subject under these three heads:

I. Modes of diminishing the irritability of cerebro-spinal or sympathetic nerve-terminations of the uterus itself, or of parts in sympathy with the uterus.

II. Modes of exciting the nervous centres concerned in parturition, of exalting their polarity, or of diminishing it.

III. Modes of preserving the uterus itself in, or restoring it to, a healthy condition as regards its textures, or of obviating the dangers to which a deficiency in its quality may give rise.

I. Hyperæsthesia of the various nerve-terminations in connection, either immediately or remotely, with the uterus, encounters the obstetrician very frequently. To be able to recognise them, or to be aware of their existence and nature, which amounts practically to the same thing, will smooth many of the minor difficulties of patient and accoucheur. To commence with the uterus and the vagina, I will refer first to irritable conditions of these organs, and morbid states of certain of their contents which admit of alleviation. Irritable states of the upper part of the vagina and vaginal surface of the cervix uteri, existing at the time when labour actually takes place, may be treated in two ways: either the parts themselves may be made the subjects of various applications, or general anodynes may be resorted to. In minor cases, where suffering is not very intense during the early stage of labour, local medication is perhaps the best, because it does not interfere with the natural chain of events in any way. When acrid and profuse discharges exist, whether connected with specific disease or not, injections of carbonate of soda in solution with watery extract of opium, may be serviceable; or, the parts having been cleansed by tepid injections, various extracts may be smeared on the surface of the cervix uteri, or left to produce their effect in the vagina as soluble pessaries. Conium, hyoscyamus, belladonna, and watery extract of opium may all be used for this purpose; I have saturated a sponge with solutions of these extracts and introduced it into the vagina, with good effect. A part of the influence of such remedies is of course due to their absorption into the circulation; but in the main their effect is local. Emulsions of oil and mucilage may be used for the purpose of allaying an irritable condition of the vagina; and they will be the more efficacious if containing one of the anodyne extracts mentioned before. An opposite kind of application may be used if the case comes under observation two or three days before labour sets in; viz., a lotion of nitrate of silver of about five grains to the ounce. I am referring now to instances of cervico-vaginal leucorrhœa, and more especially to those which are dependent upon constitutional syphilis. When the epithelium of the upper part of the vagina desquamates in patches, leaving a highly injected surface bare, the nitrate of silver is peculiarly suitable; indeed, no other agent appears to be able to allay even temporarily the irritability of the canal under such a condition; and, failing its use, recourse must be had to the internal administration of anodynes—to centric medication, in short, instead of eccentric. When abrasions or ulcerations exist, which is not often the case, the irritability they produce may be treated in exactly the same manner. Cicatrices, if not dense enough to require surgical interference, are best treated by the application of some anodyne extract, while at the same time antimony and opium internally will materially assist, not only in favouring relaxation of the part, but in inducing a quiescent state of the nervous centres, as well as of the vascular system. Plethora of the uterus is a condition which it is hardly possible to deal with unless it be discovered some time before the advent of labour. It is characterised by lingering persistent pains in the early, and irregular crampy pains in the later stages of labour. It is associated, moreover, with a full state of the hæmorrhoidal veins, with a general engorgement of the pelvic viscera, with torpor and congestion of the liver, and with a tendency to obesity or general plethora. The obvious plan of treatment is the exhibition of moderate purgatives; not, of course, pushed to such an extent as to bring on labour. Small doses of blue pill at night, and potassio-tartrate of soda in the morning, given several days consecutively, will prove of service; but generally speaking the actual existence of uterine plethora is unknown till labour commences. Irritable conditions of the uterus, arising out of inflammations of the placenta and amniotic sac, are commoner than is generally supposed; though, connected with syphilis, they are by no means invariably so. I have been able to trace distinctly the progress of inflammation of the amnion sac, from the first symptom of rigors to that of local pain and tenderness, then dropsy of the sac, then premature and painful labour. I have seen patches of recently effused lymph on the membranes in such cases. The treatment of irritability from such a cause is the treatment of the inflammation itself; *i.e.*, if there is opportunity before labour for treatment at all. Leeching, grey powder, and Dover's powder, stupes, and fomentations are appropriate. But if labour has begun, we may choose between sedatives internally or mere sedative applications as described before. The irritability which derives from the presence of tumours must, if such growths are irremovable, be treated by centric medication—opium, belladonna, hyoscyamus, conium, or chloroform.

The reflected irritations which influence the character of labour form a more important class of phenomena than the purely local hyperæsthesiæ of the uterus and vagina. The treatment of the morbid alterations in the character of the uterine contractions which accrue from the numerous forms of reflected irritation, may be resolved into two modes of influencing such alterations. In the first place, it may be sought to bring the polarity of the nervous centres, through which all impressions must pass, down to a level somewhat below the natural standard, or at any rate below the standard which obtains at the time when interference is made. In the treatment of reflected irritations, this principle has been too much overlooked; it has been very much the custom to inculcate the propriety of removing the sources of irritation; but it has been insufficiently remembered that the nervous centres are after all capable of very much modifying the impressions conveyed to them, and through them. An irritation, in short, is only important according to the value it possesses after transmission through a nervous centre. Morbid excitement of nervous centres, as in tetanus and hydrophobia, present us with violent actions of a reflex nature, quite out of proportion to the stimuli applied; and various kinds of narcotism, on the other hand, show us a disproportion of a reverse kind between excitation and motion. The law of physical dynamics, which tells us that action and reaction are equal, is not true in vital dynamics; for at the point of reflection we have organs which are capable of multiplying or diminishing the incident stimuli. Whatever organs, then, may be in a state of morbid irritability, and from whatever reflected irritations the uterus may be suffering, provided the special features of the case do not forbid it, we are always open to consider how far we may avail ourselves of the assistance of narcotics or anæsthetics. I shall not enter upon the general question of the employment of such agents here, because I wish to discuss it in another section, and in connection with the properties of some particular remedies. But I will only insist upon this; viz., that there are numerous cases of mal-action of the uterus arising from reflected irritations which are amenable to, and properly treated by, narcotics and anæsthetics, and that such a method of treatment is not only justifiable, but preferable in most cases to any other. Practically it will be found that in a large majority of cases there is not time to initiate any treatment beyond the administration of general anodynes, narcotics, and anæsthetics.

In the event, however, of time being sufficient to allow of our attempting to subdue the various eccentric hyperæsthesiæ which are reflected to the uterus, by acting upon the organs themselves which are in an undue state of excitability, the following are the means which appear most adapted to the end in view. And first of all, with regard to states of the ovaries. It is in the earlier months of pregnancy, that is to say, from the second or third to the seventh months, that hyperæsthetic conditions of the ovaries influence the uterus. Whether this irritability of the dominant organs of the female sexual economy is of the nature of neuralgia or congestion, or subacute inflammation—or whether it be an exaltation of a special force which normally determines the advent of uterine combinations, appears very obscure; and, like many obscure things in medicine, not very important in a practical point of view. Deep seated pain in the flank, tenderness as deeply situated, pain down the thighs and in the inguinal region, wandering pains in the abdomen, irritability of the bladder, slight uterine contractions, and the commencement of secretion from the vagina, or a slight show of blood, are symptoms which indicate the several varieties of ovarian excitement *about to terminate in labour*. In the pathological investigation, I stated that conditions of the ovaries do not influence mature parturi-

tion in the same way as they do premature labour; and this fact does appear to me to make rather against the theory which regards the ovaries as the fountains and originators of the parturient impulse; for if morbid excitations of the ovaries are at the root of abortions and painful premature labours, which is an undoubted fact, *à fortiori*, morbid excitations of the ovaries should still more concern mature labour. I need hardly say that this *is not* the fact. In short, the further we are from mature labour, the less conspicuous is the influence of the ovaries over the parturient act, as far as all morbid actions are concerned; and we have yet to learn that a subtler influence issues from the ovaries at the full period, or one essentially different in its nature from the influence which determines abortions and premature births. As far as regards ovarian hyperæsthesia occurring at the full period, and during the actual progress of labour, I must confess myself ignorant, both as to its diagnosis and treatment: as to the latter, however, I see no room for special medication, even if the disorder were recognised; I should resort to general anodynes. In early pregnancy, however, the case is different. Hygienic precautions are perhaps as useful as drugs in allaying or preventing ovarian excitement. Recumbence exercises an influence over even neuralgia of the ovaries in the unimpregnated condition, which appears inexplicable even by reference to the effect of posture upon the circulation in these organs; in the pregnant state its influence in still more marked. The bed slept in should be hard, the coverings light; the temperature of rooms inhabited cool; the diet unstimulating, and especially as regards wine, spirits, or malt liquors; for the ovaries resent alcoholic drinks as decidedly as the testicles do when inflamed or irritable. I have seen half a glass of bitter ale throw a patient into a paroxysm of the acutest suffering, when the ovaries have been the seat of neuralgia. Sexual congress should, of course, be prohibited. A solvent condition of the bowels should be kept up by the use of sulphur or Rochelle salts; resinous aperients should be avoided, as they all stimulate the rectum more or less; and active diuretic salts should also be avoided, for they stimulate an organ which is in very close sympathy with the uterus; viz., the kidney. Local bleeding does not appear to be advisable, unless tenderness on pressure is a prominent feature of the case; but counterirritation I would certainly resort to. The establishing of a blister is certainly producing a new eccentric irritation; but then it is substituting an irritation of a part not in special sympathy with the uterus for an irritation of an organ most specially in sympathy: and this is its advantage. Medicines which possess a peculiar anodyne influence over the ovaries are not much known. Antimony, ipecacuanha, lupuline, camphor, and sugar have been looked upon as sedatives both of the male and female dominant sexual organs. Antimony and other drugs which create nausea do certainly allay sexual excitement; but whether this is due to their effect on the circulation primarily, or to a special action on the sexual organs, there does not appear sufficient evidence to determine. Aconite may be used on the same principle. Lupuline I have tried, and I see no reason to believe that it is anything more than a general anodyne and narcotic; and camphor does not, in my opinion, exert any special influence over the ovaries. It may appear strange to speak of sugar as an ovarian sedative; but there are facts which tend to show that this article is not without a very marked influence upon the sexual system. I have been told by Americans and West Indians that at the time of the sugar harvest, when the negroes eat large quantities of sugar, they become very fat, and almost entirely cease to copulate. I have been told also that whites who indulge in sugar in the same way experience temporary impotency, or such a degree of disinclination to sexual commerce as renders them proof against any solicitations, however seductive or importunate. Whether these facts are applicable to the treatment of ovarian hyperæsthesia, I have not been able to ascertain. I made some experiments, in which sugar was given to the extent of half a pound a-day, but no satisfactory results were arrived at; the experiments, however, were neither numerous nor very well chosen, so that the inquiry still remains perfectly open. Cannabis Indica has not received the attention it deserves in relation to the sexual system. On the whole, much faith is not at present, at any rate, to be placed in sedatives which act specially on the ovaries. As, however, habitual irritation of these organs invariably sets up exalted polarity of the nervous centres, we can fall back rationally and usefully upon general anodynes; these, with counterirritation, recumbency, laxatives, and careful hygienics, will serve our purpose moderately well.

Irritable states of the bladder occurring during labour, and arising out of calculus, cystocele, or a chronic catarrh of its mucous coat, are not very much amenable to topical medication. If the calculus could be kept in any particular position during the progress of labour, it would be an object to adjust its position to the fœtal presentation; but I should suppose that nearly all that could be done would be to keep it above the pubes as the fœtal head descended. One point, however, seems obvious; viz., to keep the bladder as full of urine as may consist with safety. By this means the whole weight of the calculus will not be concentrated on the surface it is actually in contact with. In cystocele, an exactly opposite course is best; the water should not be allowed to collect in the bladder at all. I have passed a small catheter into the urethra in such a case, and at the same time placed an ovoid sponge in the vagina, so as to prop up the prolapsed vesical wall; the patient in this case declared she suffered much less than on any previous labour since she had been subject to the prolapse, and the treatment evidently produced a marked diminution of her sufferings. When there is an irritable state of the bladder from catarrh or chronic inflammation, it may not be amiss to wash the bladder out, by means of a double catheter, with warm water, and then to rely upon a full dose of opium.

Fissure of the rectum can only be treated by suppositories of watery extract of opium, or by overpowering doses of opium or morphia, or by chloroform. Hæmorrhoids, in so far as the irritation they produce, may be dealt with in the same way. Rectal irritations are the most severe perhaps of all those which react upon the uterus; and this depends not only upon the sympathy which exists between these parts, but upon the influence which states of the rectum have upon various muscles very much concerned in the act of parturition. It is hardly possible, indeed, to have a morbid state of the rectum and not to have a morbid action of the muscles which form the floor of the pelvis (and of the vesical muscle also); other respiratory muscles also take on abnormal actions, and a natural and equable operation of the mechanical forces is put out of the question. On account of the violence with which rectal irritations react upon the uterus, it will, I believe, generally be found advisable to resort to chloroform. Scybalous masses lodged in the rectum do not come under this category; for copious warm water enemata will nearly always remove them; and if anything more is required, a morphia suppository will answer every necessary purpose.

Renal irritations should be attacked at as early a date as possible. In albuminuria, the state which is nearly always connected with renal irritation in the pregnant woman, no remedy appears to act more speedily and with greater effect than local bloodletting—cupping. The glasses should be applied in the lumbar region, of course; and relief to the lumbar pain will generally be afforded even during the operation. The skin should be kept active by warm baths or vapour baths; the liver and bowels kept tolerably active by such aperients as the compound jalap powder, and moderate doses of grey powder. By these means part of the work of depuration will be taken off the kidneys; and the secretive functions of the organ being less taxed, there is the desirable condition of comparative rest obtained, and a less active circulation in them. The use of diuretics requires some caution. They are, I know, nearly always resorted to, and frequently with the best effects; but it is necessary to exercise discrimination in their choice, and to have clearly in view the objects we seek to obtain by using them. The aim of treatment in such cases is threefold; first, to subdue renal irritation; secondly, to relieve the distress arising from tension of dropsical parts; and, thirdly, to stop the secretion of albumen, and improve the condition of the blood. The first of these indications is answered by cupping, aperients and cholagogues, vapour baths, and other sudorifics, and dilution of the urine; the urine in such cases is very commonly loaded with lithates and lithic acid, and is stimulating on account of its intense salsification with acrid salts. The best diluent is water. The dropsy and its attendant discomfort are to be removed by increasing the flow of urine; in short, by draining the body. Now, in effecting this purpose we should be careful, first, not to over-stimulate the *secretive* function of the kidney, and, secondly, not to exhibit any drug which will excite uterine contraction, or destroy the fœtus *in utero*. I think it is pretty clear that alkaline diuretics will give us a maximum of watery flow with a minimum of kidney stimulation. The kidney, it should be remembered, is the natural eliminator of saline matters; and, imitating nature, if we apply stimuli of like kind to the physiological stimuli, we shall procure the increment of function at

the least expense of stimulation. The diuretic essential oils and scoparium I object to as being too stimulating. Digitalis is dangerous in two ways; first, because there is a risk of setting up uterine contractions; and, secondly, because digitalis will sometimes kill the fœtus *in utero* by producing paralysis of the heart. I have seen this occur. We are not concerned here with the other indication of treatment. The form of diuretic I would use would be the acetate of potassa *largely diluted*, combined with the vinegar of squill, and full doses of tincture of henbane. It was taught by the late Dr. Golding Bird that acetate of potassa was the best diuretic salt in the pharmacopœia; and he especially insisted on the practice of *dilution*. The urine appears to be more readily made alkaline by this salt than by the other salts of potassa; the nitrate passes out of the body as nitrate; liquor potassæ is less diuretic and is apt to throw down the phosphates of the urine while the bladder is still full; and the same is true of the carbonate; the bicarbonate may be used if the stomach rejects the acetate. It should be remembered that it is not diuresis *only* that is required, but a copious secretion of bland urine, at the expense of as little stimulation to the kidney as possible.

Hyperæsthesia of the gastric nerves is a very embarassing complication of pregnancy. The danger to both mother and fœtus is very considerable; indeed, it often happens that one must fall a sacrifice to the other. The vomiting which declares this irritable state of the nerves of the stomach is only, so far as I am aware, capable of being dealt with by two methods of treatment as long as the fœtus remains *in utero*. The first is the resolute use of morphia and hydrocyanic acid; and the second is a dietetic system, of which I will speak presently. A radical error is generally committed in the administration of opiates in the gastric irritability of pregnancy, and in other cases also where it is desired to allay vomiting. The *bulk* of the dose is almost invariably too great, the sedative is given too much diluted, and the quantity of fluid is resented by the stomach. It should be borne in mind that a medicine used for the purpose in question is essentially a *lotion* to the coats of the stomach. If the lotion is made too weak the intent is frustrated. The bulk of the dose should never exceed one fluid drachm, and it may be made less with advantage. Half a grain of acetate of morphia, three drops of the dilute hydrocyanic acid, and one of Fleming's tincture of aconite, to a drachm or even half a drachm of water, will not only burthen the stomach less, but will produce a greater *topical effect* on the nerves of the stomach than if given in the usual state of dilution. The food should be given in one of two ways; if taken in any considerable quantity, *i.e.*, if any attempt at a meal be made, it should be eaten soon after the exhibition of a dose of the medicine, and should be soon followed by another; or the diet should consist of single spoonfuls of milk, strong beef tea, or egg-brandy, often repeated; or very frequent doses of protein. The most remarkable case of vomiting I ever heard of was successfully treated by five grain doses of protein given in a teaspoonful of milk every hour; the case occurred some years ago, and was recorded in the journals of the time, but my memory will not serve me for a reference. The dietetic principle seems to be either to overpower the hyperæsthesia immediately before eating; or to give food in small quantities, and in such a form as to pass readily into the duodenum, thus diminishing the offence to the stomach, and throwing the task of digestion mainly on the small intestines. It is of course only possible within these limits to do more than indicate the general plan of treatment or the principles upon which to act. Modifications easily arise when the main principle is grasped.

The last eccentric irritation to which I shall refer is hyperæsthesia of the mammæ. Mere irritability of one or both breasts may obtain, or the altered innervation of the part may be succeeded by great vascularity and induration; and in some extreme cases suppuration takes place. There can be little doubt but that these affections of the breast, which in the first instance derive from the irritation of the ovum contained in the uterus, are again reflected upon that organ. A brisk saline aperient and leeching, followed by the application of a belladonna plaster, will be found the best method of treatment.

The preceding remarks are a mere sketch of *eccentric medication*. In the next paper will be discussed *centric medication*; the properties of the agents used, and the circumstances which call for, or disallow, their exhibition.

[*To be continued.*]

CASES OF POISONING BY WHITE PRECIPITATE, AND BY POPPY-HEAD.

By W. H. Michael, Esq., Swansea.

[*Read before the Monmouthshire and South Wales Branch, July 23rd, 1857.*]

I. POISONING BY WHITE PRECIPITATE.

Miss P., a schoolmistress, aged 37 years, on December 27th, 1856, bought, at three druggists' shops, fourpennyworth of white precipitate, for a suicidal purpose. She obtained, as it would appear from the statement of the tradesmen who supplied her, 140 grains of ammonio-chloride of mercury, two samples of which, when analysed at the shops, were found to be absolutely pure. At or about 8 o'clock in the evening of the same day, she ate a large portion of the powder spread on bread and butter. About ten grains, adulterated with sulphate of lime, were found on the plate which she had used, and on some portion of the bread and butter she had been unable to eat, and had thrown away. Judging from her own statements upon several occasions, and from the foregoing facts, it appears probable that not less than one hundred grains were swallowed. She was seen by me about three hours and a half afterwards, and was then lying on the floor of a bedroom, complaining of great pain in the region of the stomach, and severe intermitting cramp of the left side and lower extremities, which came on at intervals of two or three minutes. The pulse was very rapid, weak, and thready; the surface cold, and covered with a clammy perspiration; the countenance was pale, drawn, and anxious; the tongue very red; the pupils were dilated, and contracted but slowly under the stimulus of light. She had vomited very freely a thick tenacious mucus, of a white colour, with white sediment. This I was unable to examine, as it had been thrown away previously to my arrival. About half an hour afterwards, the bowels were very freely acted on, an enormous quantity of fœtid fæces passing, sufficient to fill two chamber utensils. Several pieces of white precipitate were picked off the tongue, which had apparently been left there by the action of vomiting, which was kept up by diluent drinks for two hours. Great prostration continued for several hours, and the pain in the stomach continued for three or four days, when it gradually subsided. On Dec. 28th, reactionary fever set in, which, however, was never severe, the pulse seldom ranging beyond 120, and the head remaining unaffected: indeed, it appeared as though the thorough unloading of the alimentary canal had been productive of great benefit to the general health; the appearance of Miss P. after her recovery, which took place in a fortnight, being better than it had been for some years. *No salivation occurred.* The treatment adopted consisted of emetics, diluents, and sedatives, with counterirritation and application of external heat until reaction set in, when ordinary salines, etc., followed by quinine, were employed.

The features of interest in the case are, the large quantity taken, and the comparative immunity from alarming symptoms, which may probably have been owing to the vehicle (butter) shielding the coats of the stomach, and disarming the poison of some of its noxious effects.

II. FATAL POISONING BY A POPPY-HEAD.

On February 27th last, two children, twins, about three months old, were brought to me about 11 A.M., evidently suffering from narcotism. It appeared, upon inquiry, that the mother had the night before, with the view of procuring sleep, boiled a poppy-head in a small saucepan, and given each child one or two teaspoonfuls of the decoction. Stimulants, coffee, etc., were administered; but one child died the same evening, seven or eight hours after it was first seen. The poppy-head was shown me, and a few drops of the remaining decoction, which had the characterisic opium smell. No tests were applied.

CASE OF CONCEALED ACCIDENTAL UTERINE HÆMORRHAGE.

By John Audland, Esq., Tintern, near Chepstow.

On Sunday afternoon, August 30th, I was sent for to visit Mrs. M., aged 42, who expected her tenth confinement in three or four weeks. I learned on that and subsequent visits, that on the previous Wednesday night, soon after getting into bed, she became very faint and cold, and had a severe fit of shivering. Some gin was given her, and she gradually rallied. The next morning she got up, but felt very weak and giddy,

and her limbs could scarcely support her. On Friday, she was obliged to go out, and walked with some difficulty a distance of about a mile and a half. About 2 A.M. on the Sunday morning, she was suddenly seized with vomiting, and became faint, and felt, to use her own words, her burden fall down. She continued weak and faint, and vomited at intervals during the morning; and between two or three o'clock in the afternoon, I saw her. She was then extremely low and weak, with pale face, sunken eyes, contracted features, and a weak and fluttering pulse. She had had no regular pains, but felt a fulness about the loins and hips, and a constant bearing down. The uterine tumour was large and prominent, and remarkably hard and tense. On making an examination, I found the os uteri dilated to about the size of a crown-piece, the membranes unbroken, and the head presenting. There had not been the slightest discharge. I administered stimulants; and before I had decided what other means to adopt, a severe pain came on, by which the membranes were broken, the child (of course dead) and the placenta, followed by large clots of blood, were expelled. I bound up the abdomen, gave a large dose of tincture of opium, administered brandy and other stimulants, and the woman gradually rallied. By nutritious diet, a course of iron, etc., she slowly recovered, and is now, although still weak, able to go about.

Remarks. The presumption is, that from some cause or other blood was, on the Wednesday night, poured out between the uterus and placenta, where it was confined; for, on examination, a portion of the placenta (about one-sixth of the surface) was much more condensed than the remainder, and had clotted blood firmly adhering to it; and that, perhaps, on account of her exertion on Friday, more blood was shed, which caused the whole placenta to be separated on the Sunday morning when she was suddenly seized with vomiting, etc., and felt her burden fall down. It was very fortunate that the woman had a capacious pelvis, and had always rapid labours, for had any delay taken place in the birth of the child, she would probably have sunk.

In an interesting paper on "Concealed Accidental Uterine Hæmorrhage", by Dr. Oldham, in the *Guy's Hospital Reports* for 1856, it is stated that only three cases occurred in that institution out of 22,498 deliveries, and that all three were fatal. One successful case, a private patient, is reported.

Such being the rarity and fatality of the occurrence, perhaps the above case, where nature herself successfully effected the delivery, may be worthy of record.

British Medical Journal.

SATURDAY, OCTOBER 31st, 1857.

THE CHOLERA AT WEST HAM.

The outbreak of cholera at West Ham has, we are glad to say, ceased. The six deaths which took place in "Abbey Row," together with the decease at Horsleydown, will, therefore, we trust, include the amount of the scourge for the present year. It was at first stated that in several of the cases there was no premonitory diarrhœa; but Dr. Macloughlin has since carefully investigated the whole of them, and has arrived at the conclusion that diarrhœa was present in every case.

Dr. Snow, whose ideas respecting the transmission of choleraic poison are well known, asserts that the evacuations of the seaman who died of the cholera on board ship at Horsleydown were thrown into the Thames, and that the poison was in this manner transferred to the well, from which the people in Abbey Row drank, the well being subject to the overflows of the river Lea, which is several miles from the place where the organic choleraic evacuations were discharged into the Thames. If it be indeed possible to impregnate the immense mass of water in such a river by such apparently homœopathic doses of choleraic matter, it seems to us that every person who drinks of that water, and not only every person who drinks of it, but every person who breathes the air on its banks loaded with its vapour, should be subject to an attack of the epidemic as well as the unfortunate people of Abbey Row, who at least had the advantage of receiving the affected water filtered through the earth.

Dr. Snow would perhaps argue that, inasmuch as the minute particles of cholera seed would become widely dispersed in the water of the Thames, the chances are that only a few of them would come into contact with the human stomach. This would indeed be one manner of explaining the difficulty; but we confess we can scarcely imagine one of these particles so perverse as to sail up the Lea, and actually seek out a certain pump through the very earth that lay below it, and the sewer it was supposed to have entered; for, be it remembered, it is not at all proved that the Lea water finds its way in any other manner into the well, if, indeed, it finds its way there at all. It is much more easy to believe that the cholera evacuations would float up and down the main stream, than that they should enter a small well, as they must have done, according to Dr. Snow's hypothesis. Of course it is impossible to disprove that gentleman's explanation; but we must confess, with Dr. Lankester, that he does not, in our opinion, at all succeed in proving his case. What has become of all the other cholera seeds? Are they still floating about the Thames, and only waiting for the accidental dip of a bucket to introduce the disease at any point between the North Foreland and the place where the tidal influence ceases? If, indeed, these death-dealing germs are always laying in wait for us in the river, what guarantee have we that they may not be taken up by the pipes of the water company, and thus be distributed to us any morning as we wash our teeth? Dr. Snow may object, indeed, that the filters interpose between us and "pure death" in the form of this unfortunate seaman's floating dejecta, but he has already managed to percolate it through the earth at Abbey Row in order to get it into the well.

This theory is, we confess, a very alarming one, and calculated to keep Londoners from trusting water in any form. And why Londoners only? The cholera germs may escape out to sea, and ultimately poison somebody at the Feejee islands—for the germ, according to Dr. Snow, would appear to be indestructible. We trust Dr. Snow will pardon us for thus carrying out his theory to an absurd conclusion, and beg to assure him that it is far from our wish in any way to depreciate his labours with respect to cholera; they have been unsparing and able, and entitle him to the respect of his medical brethren. We fear, however, that he is carrying his theory of the manner in which cholera is propagated too far, in thus attempting to clip and shape any new outbreak so that it shall fit the Procrustian bed he has made for it. That cholera evacuations may be conveyed from one person to another by means of water, and thus spread the disease, is most probably, under certain circumstances, the case; but Dr. Snow should scarcely have floated his cholera germs with such unerring accuracy for two miles up a great tidal river and its tributary, into a sewer, and thence into a well, in order to account for the deaths of six people from cholera in Abbey Row.

THE WEEK.

A trial took place at the Central Criminal Court, on Wednesday, which forcibly illustrates the wickedness of allowing the public sale of opium. A woman named Bridget Kavanagh was indicted for the wilful murder of her child, Julia, aged three months, by poisoning it with laudanum. It appeared that the child was a little sick after its breakfast on the 13th of September, when the mother asked a witness if she could not get some "doctor's stuff" to make it sleep, expressing at the same time a wish that the child was dead. Shortly afterwards she went out and returned with a bottle of "doctor's stuff," which afterwards proved to have been laudanum. The potion, of course, poisoned the child, who died fifty-four hours afterwards at the University College Hospital. It appears from the following evidence that the poison was obtained as what is termed the "open shop" of a surgeon.

"Mr. G. Tuttle deposed, that he was assistant to a surgeon named Carter, in Fitzroy-street. On the 14th of September the prisoner came to the shop and asked for some laudanum. He inquired what she wanted it for, and she said it was to make a woman sleep, and she wished to know how much she was to give her. He told her ten or fifteen drops, and gave her a drachm of laudanum in a bottle, and put a label on the bottle, marked "Laudanum—Poison," and he also at the same time told the prisoner it was poison. A drachm would contain sixty drops. He did not think he was doing wrong in selling the laudanum to the prisoner. She did not tell her name or where she lived. He made no farther inquiries of her, and did not ascertain whether the laudanum was to be given to a person in health or sickness, or whether it was a strong poison or not."

The Judge, in summing up, observed,

"That it appeared to him to be, at all events, a careless proceeding on the part of a chemist, or other person acting in that capacity, when fifteen drops were sufficient for the required purpose, to give, as had been done in the present case, four times the quantity, namely, sixty drops; and he thought a special caution ought to have been given, that the quantity contained in the bottle amounted to four doses."

The Judge, of course, in his remarks, has in view the accidental poisonings that may flow from the indiscriminate sale of poisons. Of course the mere labelling of the bottle with the proper dose would be of no use in the case of a would-be suicide; indeed, it would only have the effect of showing the amount necessary to procure the desired end. We think he should have dwelt upon the carelessness of allowing the sale of opium at all to unknown persons. God only knows how many infants are put out of the world with this kind of "quietner;" and we regret that the drug was sold at the "open shop" of a surgeon whose assistant should have known that it was very likely to be criminally used. The profession will, indeed, have a bad name if the public get the idea that, through their carelessness, the tendency to infanticide, already so strong in this country, is strengthened. The jury, after a reproof to the vendor of the drug, taking a very merciful view of the case, found the woman guilty of manslaughter only.

The chairs of Regius Professor of Physic, and of Clinical Professor, in the University of Oxford, rendered vacant by the death of Dr. Ogle, have both been filled by the appointment of Dr. Acland. In the case of the Regius Professorship, the appointment was made by the Crown: for the Clinical Professorship there was an election by Convocation, in which Dr. Acland was opposed by Dr. Jackson, a graduate of the university and one of the physicians of the Radcliffe Infirmary. We are glad, however, to find that Dr. Acland was elected by a large majority. For, however good a man Dr. Jackson may be, and notwithstanding his seniority to Dr. Acland in the Infirmary, his successful opponent has shewn himself to be more than ordinarily qualified for the performance of the duties to which he has been appointed; and it would have been almost a pity, considering that there is not in Oxford a great *embarras des richesses* in the way of materials for practical instruction, to exclude the Regius Professor of Physic from the power of making the systematic and the clinical courses harmonise with and illustrate each other. The selection of Dr. Acland to fill the vacant offices is one which will give great satisfaction to the profession; and the University of Oxford is to be congratulated on so efficient an addition to her professorial staff. As for Dr. Acland himself, we trust that he may long enjoy his honours, and always continue to follow that path of onward progress on which he has for some time past been journeying.

The recent election of a Surgeon to the Queen's College at Birmingham, the circumstances attending which are recorded at p. 915, was certainly a rather curious affair in its result. The Professors of Medicine and Surgery in Queen's College were requested to make a report on the testimonials of six candidates. They accordingly reported, that all the six candidates were qualified and eligible; but they made a special recommendation in favour of Mr. J. S. Gamgee, both on account of his professional ability, the manner in which he had performed his public duties, and his contributions to surgical science. But, strange to say, this recommendation was set aside, and a candidate was chosen, who, however great may be his merits, certainly does not appear to have the same standing or to have enjoyed the same opportunities of acquiring professional skill as several of the other candidates, even not including Mr. Gamgee. Rumour hints that there has not been altogether fair play; in short, that the object of the new scheme in neutralising jobbery has been defeated. Until this is proved true, little can be said about it; but one thing is certain—that the Queen's College Professors have not been treated exactly as gentlemen should be, to whom the performance of a responsible duty has been committed.

The inquest on the remains found a few weeks ago at Waterloo Bridge has terminated in a verdict that the deceased was murdered by some person unknown. So far, then, there is no doubt as to the mode of death, but it yet remains for justice to lay hands on the perpetrator. The elaborate report of Professor Taylor distinctly establishes the facts that the person was an adult male, of rather tall stature, probably a dark hairy man; that death was probably produced by a stab in the region of the heart—there being no marks of violence discoverable in any other part of the remains; and that the body had certainly not been dissected or used for the purposes of anatomy, having been cut and sawn up by a person or persons utterly ignorant of the anatomical relations of parts. After Dr. Taylor's report, all practitioners and students may rest assured that no one with a grain of sense will again insinuate that the body was one which had been in the hands of a skilled dissector, and that it was thrown over Waterloo Bridge for an absurd frolic, or for any other equally discreditable reason.

Association Intelligence.

LIST OF MEMBERS: NOTICE.

In accordance with Law 24, a list of members of the British Medical Association will shortly be published. Gentlemen whose designations or addresses are incorrectly given in the last list, or on the wrappers of their Journals, will oblige by at once forwarding the necessary corrections to the Editor of the Journal, 37, Great Queen Street, Lincoln's Inn Fields, London, W.C.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Saturday, October 10th, 1857.

Francis Hird, Esq., President, in the Chair.

This was the first meeting of the Session, and was numerously attended.

INSTRUMENT FOR CLINICALLY DETERMINING THE AMOUNT OF SUGAR IN DIABETIC URINE. BY A. B. GARROD, M.D.

The instrument, named a *Glucometer* (manufactured by J. Coxeter, Grafton Street East), is constructed upon the fact, that glucose or diabetic sugar, when boiled with a solution of carbonate of potash, gives rise to an amber colour, and that the tint is in proportion to the quantity of sugar. The apparatus consists of a standard, a graduated tube of the same calibre as the standard, and an accurately divided minim measure, the standard being filled with a solution of the exact tint produced by a known quantity (half a grain) of the diabetic sugar to the fluid ounce. The following is the method of using the glucometer:—A small quantity of the urine, say half a fluid drachm, either previously diluted or not, according to circumstances readily ascertained, is to be accurately measured in the small minim tube, and mixed with the same bulk of a solution of carbonate of potash of a given strength, and after the measure has been washed out with a drachm or two of distilled water, the whole is to be kept at the boiling point over a spirit-lamp for five minutes, either in a large test-tube, or, still better, a very small flask. After cooling, the coloured liquor should be transferred to the large tube, and distilled water added until the tint exactly corresponds to that of the standard,—a process which may be readily effected by holding the tubes side by side, directing them to a moderately bright light. All the required data for determining the amount of sugar are now obtained. Suppose, for example, that the half drachm of urine employed in the quantitative analysis requires to be diluted so as to occupy six and a half drachms before the standard tint is obtained, such urine would contain six grains and a half of sugar per ounce. Again, suppose the urine had been diluted with three times its bulk of water before being employed in the glucometer, which, when the urine is rich in sugar, may be necessary, in order to prevent the graduated tube being of inconvenient length, then it is only required to multiply the amount of sugar by four to obtain the total quantity in the original urine. In the above-named experiment it would therefore be twenty-six grains in each fluid ounce. Dr. Garrod expressed a hope, that by means of the glucometer the clinical determination of sugar might become a matter of little difficulty, and capable of being effected by any one engaged in the practice of medicine; and he also considered that such determinations might prove of great value, not only in ascertaining the amount of disease under which any diabetic subject might be suffering, but also the value of various articles of diet and of different remedies in the treatment of this disease.

STARCH FROM THE ANIMAL KINGDOM. BY F. W. PAVY, M.D.

Dr. Pavy exhibited some of the newly discovered amylaceous material which is obtainable from the healthy liver, and which forms the source of the animal sugar. Upon the announcement of the discovery by Bernard in 1848, that sugar was formed in the animal body, it was referred to a transformative action of the liver on an albuminous constituent of the portal blood. The next step of information showed that the production of sugar could not be regarded as analogous to the process of secretion. In September, 1855, Bernard announced, at the Académie des Sciences, that the formation of sugar continued for twenty-four hours after death, in a liver from which the blood had been entirely removed. During the early part of the past summer, Dr. Pavy had noticed, whilst conducting experiments on the *destruction* of sugar, that he could isolate a material from the liver which subsequently underwent transformation into sugar; and he had recorded in his laboratory-book the influence of chemical agents, such as acids, alkalies, and alcohol, on this material. He had since learned, however, on his recent visit to Paris, that Bernard had most satisfactorily made out the nature and relations of this body, which, from the analogy presented in its chemical bearings to starch, he had called an animal amylaceous or starchy material. It had also been called glucogenic material, and this was probably the best term to apply to it at present, because it implied nothing more than we knew the substance in reality to be. The specimen of this glucogenic material which Dr. Pavy exhibited had been procured from the liver of a dog in the following manner:—The dog had for some days been submitted to a strictly animal diet, so as to preclude the introduction of any starchy material into its system from the vegetable kingdom. After killing the animal, by the destruction of the medulla oblongata, the liver was removed, and a tube firmly ligatured in the portal vein, for the purpose of passing a current of water through the vessels to wash out the blood, and at the same time remove the sugar. In half an hour the water which had passed through the vessels was colourless and destitute of sugar, as was also the tissue of the liver itself. The organ was now cut up into small slices, placed in an evaporating dish, boiled in the liquid which exuded from it, and subsequently strained and pressed to obtain all the liquid that was procurable. The object, in fact, was to make a decoction of the liver, which holds in solution the glucogenic material, and has, thereby, communicated to it an opalescent or milky appearance. This was then mixed with alcohol (in the proportion of one part of the decoction to about five of the spirit), and immediately a precipitate was produced, which was collected on a filter and dried. The substance was of a greyish colour, which resulted from contamination with albuminous matter. It might be made perfectly white by prolonged boiling in a solution of potash, which did not at all affect its properties. It was insoluble in alcohol and strong acetic acid. Its solution in water presented the same milky appearance as the fresh decoction of liver. It gave no reaction with the sugar-tests, nor was it susceptible of undergoing fermentation. It was, however, readily convertible into dextrine and sugar by the same agents which produced this change in the starch of the vegetable kingdom. Indeed, boiling with acids and contact with diastase, saliva, pancreatic juice, blood, or any animal matter in a state of change, very readily effected its transformation into glucose, when it gave all the characteristic reactions of this substance. Dr. Pavy further stated that, by means of chemical agents and the microscope, the natural seat of this material could be shown to be in the interior of the hepatic cells.

THE PRESENT STATE OF SURGICAL SCIENCE IN REFERENCE TO CANCER AND ITS TREATMENT. BY F. HIRD, ESQ.

After briefly reviewing the important subjects embraced in the origin and development of cancer, Mr. Hird proceeded to discuss the treatment, dwelling on the means of arresting cancerous growths by medicinal agents, and contrasted the comparative advantages of removing the local disease by caustics and the knife. In reference to medicines, the author believed that, if any remedy possessed a power of retarding the progress of the disease, it was arsenic, which he administered with cod-liver oil. Caustics the author had found more tedious in their operation and more painful than the knife, and to occasionally fail to enucleate the tumour; and he had no faith in a supposed physiological action on the constitution through the part treated. He had seen six cases in which the disease returned after removal by caustics, and had read and heard of many more. Nevertheless, there are cases in which caustics offer greater advantages than the knife; as in certain localities, and in particular conditions of the tumour, and where loss of blood, or the dread of a cutting operation, would greatly depress the patient. Early operation the author strongly advised, as affording the only hope from surgery in scirrhus, colloid, and epithelioma. In encephaloid he did not advise an operation.

Saturday, October 17th, 1857.

Francis Hird, Esq., President, in the Chair.

OUTBREAK OF CHOLERA AT WEST HAM. BY J. SNOW, M.D.

The outbreak had taken place in a row of cottages, called Abbey-row. He had learned a number of particulars from Dr. Elliott, who had attended most of the cases, from other persons, and by his own observation, which he would relate to the Society. Abbey-row consists of about sixteen small houses, situated about a hundred yards from one of the divisions of the river Lea, and about two miles from the Thames. There had been upwards of a dozen very severe cases in a short time, besides some slighter ones, and seven deaths occurred between the 3rd and 13th of the present month. All the cases occurred in the row of houses above-mentioned, except one, which was fatal on the 11th to the sister of a publican living opposite to Abbey-row. She assisted in the business, and had frequent intercourse with persons from the houses where the disease was prevailing. The sole water supply of the row was from a pump situated opposite to the centre of the row, and this pump was used only by the inhabitants of Abbey-row, for the surrounding houses had other supplies. The water from this pump was very impure, and deposited a considerable quantity of organic matter on standing at rest. This impurity was derived, according to Dr. Elliott and others, who had no doubt on the subject, from a sewer which passes almost close to the pump-well. This sewer was open in the greater part of its course between Abbey-row and the branch of the River Lea. It was not a black, offensive sewer; for the water of the Lea flowed up it at a certain part of every tide, and its contents did not differ much in appearance from Thames water. The following was his (Dr. Snow's) explanation of the origin of this outbreak: According to the Weekly Returns of the Registrar-General, a seaman died of Asiatic cholera, on September the 22nd, on board ship at Horsleydown, after an illness of nineteen hours. The ship had arrived the previous afternoon from Hamburgh, and had touched at Gluckstadt, and stopped there twenty hours; the cholera had lately raged at Gluckstadt, and had carried off five per cent. of the inhabitants. There might, of course, have been other cases on board of the shipping from the Elbe, but if not fatal they would not be published in the Returns of the Registrar-General. The ejecta of the above seaman, at all events, would be thrown overboard, and become distributed amongst the water of the Thames, passing up and down with the tide. Now the water of the Thames passed up the Lea, and a portion of this water passed up the tidal ditch or sewer by which the pump-well supplying Abbey-row was contaminated. There was therefore an opportunity for some of the minute particles of the ejecta thrown overboard into the river Thames to reach this pump-well. The first case of cholera in Abbey-row occurred on September 29th, seven days after the death of the seaman at Horsleydown, and two other cases occurred in the same family, but they were not fatal. Numerous occurrences in former epidemics of cholera confirmed this explanation, extraordinary as it might otherwise seem. The first recognised case of true Asiatic cholera in this metropolis in 1848, occurred also on September 22nd, and the subject of it was also a seaman from the river Elbe (the port of Hamburgh), who died at Horsleydown, but ashore, and near the river. Excepting the next case, which occurred in the very same room, all the first succeeding cases, to the number of thirteen, took place as follows: On September 30th a man was taken ill in Lower Fore-street, Lambeth, and died on the following morning. On the same day the first of a series of cases occurred in White Hart-court, Duke-street, Chelsea, near the river. A day or two afterwards there was a case at 3, Harp-court, Fleet-street. The next case occurred on board a hulk, lying off Woolwich; and the next to this in Lower Fore-street, three doors from where the previous case had occurred. Now the people in Lower Fore-street obtained water by dipping a pail into the Thames, there being no other supply in the street at that time. In White Hart-court, Chelsea, the inhabitants also obtained water in a similar way, and had no other supply. The people in Harp-court, Fleet-street, were in the habit of procuring water from St. Bride's pump, which was afterwards closed on its being found that the well had a communication with the Fleet Ditch, and the tide flows up this ditch from the Thames. So much for the introduction of the cholera to Abbey-row, and there were also circumstances to explain its propagation on the spot. The houses were provided with a sort of water-closet, to which, however, the water was carried by hand, and these water-closets communicated, by means of drain-pipes, with a large covered cesspool at the back of the row. This cesspool was believed to be not yet full as regarded its solid contents, but it received all the water used in the cottages, and the overflow of this liquid passed into the same tidal sewer or ditch, by which the pump-well was contaminated. In this way the disease had, in his opinion, been communicated from one to another of the inhabitants of the row without personal intercourse. Some patients, however, when others were previously ill in the same family, had probably acquired the malady in the more ordinary way, by the reception of the *materies morbi* without the medium of water, and the public-house in which one case had occurred was provided with a separate pump-well on the premises. The handle of the pump was removed on the previous Monday, the 12th, and there was but one case after this, which was fatal on the following day. He did not know, however, whether or not the outbreak might have exhausted itself before this precaution was taken. It was not known that there were any other cases of cholera at the time in the parish, or even in the whole of London.

Dr. Lankester had no doubt that the cases referred to were true cholera. Though Dr. Snow had proved his position with respect to the Broad-street pump, he (Dr. Lankester) did not think he had succeeded in showing that the cases at West Ham had their origin in the case on board a vessel two miles away. The outbreak was more likely to be dependent on some atmospheric or climatic influence making choleraic matter contagious.

LUPUS TREATED BY COD-LIVER OIL. BY T. HUNT, ESQ.

Mr. Hunt exhibited a patient who, under a protracted course of cod-liver oil, in small doses, had been cured of lupus exedens, of the strumous character. The patient was a woman twenty-two years of age, and had suffered from the disease for twelve years, the ulceration having involved a portion of the nose and face. The oil was administered in drachm doses three times a day, and continued for some months.

ON THE MORTALITY OF INFANTS IN FOUNDLING INSTITUTIONS, AND GENERALLY AS INFLUENCED BY THE ABSENCE OF BREAST-MILK. BY C. H. F. ROUTH, M.D.

After a few introductory remarks on the paucity of statistics published on this subject, as showing the experience of this country, Dr. Routh stated he was obliged to have recourse to the experience of foreign countries, more especially France. It was true that there might be error introduced by the comparison of data collected in different countries, still, as the vital statistics in most countries were governed by the same laws, the results would still be relatively true. Most writers on foundlings had attributed the mortality to want of breast-milk, whereas there were other causes of mortality far more potent. In papers of this kind, it was usual to speak of three hospitals, Paris, Lyons, and Rheims, besides Parthenay, and a place called X. Now, in Lyons and Parthenay, where the children were suckled at the breast, the mortality was respectively 33·7 and 36 per cent.; whereas in Paris, Rheims, and X, where they were brought up by hand, it was respectively 50·3, 63·9, and 80 per cent. From more extended examples in Europe, it was found the mortality of ordinary foundlings varied from 40 to 91 per cent. M. de Watteville, however, had shown that in France the mortality, where it was highest for foundlings, varied from 50—25, a mean of 26·5; where it was least, from 0 to 5—mean, 3·6 per cent.; and for exposed foundlings, from 83 to 60 where it was highest—mean, 72·4; and where it was least, from 0 to 19·2—mean, 13·4. In other words, the mortality from 1 to 12 years was 78 per cent.; in the first year, 50 per cent.; and the mean duration of life of foundlings was 4 years. Fortunately, of late years, it was on a decrease for all France, having been 14 per cent. in 1838, and 11·30 in 1844. Dr. Routh then instanced particularly the cases of Lyons, Rheims, and Paris, showing that the arrangements in Lyons were excellent, and all the children were wet-nursed. In Rheims, besides dry-nursing, they were very badly cared for; whereas in Paris, most were also wet-nursed, but in the two latter cases the nurses were not watched sufficiently closely.

1. In comparing the mortality of such institutions, it was necessary to determine what was the actual mortality out of hospitals amongst children generally. This was mostly neglected. Here, at the outset, there was a remarkable difference between *town* and *country* residents. In Ireland, in civic districts, the mean mortality was per cent. for children under 1, 14·7 civic, 8·8 rural districts; for children under 5 years old, 8·1 civic, 4 rural. In England, taking towns and agricultural counties, the proportion of deaths of children under 1 and 5 to all deaths was respectively, for the former age, 23·7 and 49·8; for the latter age, 21 and 34·9. Calculating for foundlings from 1 to

12 in France, the mortality was 72·2 in towns to 11·5 in the country, showing that foundling hospitals should always be established in the country: a point seldom insisted on.

2. It was said that the mortality of foundlings was greatest in the first year, and usually 50 per cent., but also greatest in the first month of the first year. In Bordeaux, the foundling mortality was 51 per cent.; in Lyons, 37·1 per cent., in the first year; but the mortality was not stated for the first month. Still he deduced the latter from lying-in hospitals and data of accoucheurs, and he found it in both cases 6·1 per cent. In all cases of children in a general population it was so also. In Ireland, the mortality in all children aged 1 month was very high, even in the ordinary population: for all Ireland, civic districts, 31·6; rural, 22·2 per cent.; while in Leinster it was respectively 38·8 and 24·9. In England, the mean mortality of such children, compared to the number of births in the year, was—towns, 4·6; agricultural counties, 4·1 per cent. For the first year it was—Ireland, civic, 14·8; rural, 8·8 per cent. England—towns, 16·7; agricultural counties, 13·9 per cent.

3. Hospital aggregation was a prolific cause of increased mortality. In London alone, for children under 1, the mortality of the population was, from diseases peculiar to children, under 1 year, 11·1 per cent.; under 5, 22·5 per cent.; from all diseases, 16·6 per cent. in the first case, to 34·1 per cent. in the second. He attributed the mortality of children under 1 month, in Ireland, to the filthiness and poverty of Irish cabins, which he described in a quotation from the *Quarterly Review*, No. 203, p. 78.

Thus, apart from foundling hospitals, a large share of this mortality could be accounted for.

In specifying some of the causes of mortality peculiar to foundling hospitals—

1. Effect of removal had not the injurious results ascribed to it. This was proved by statistics from France.

2. Season. Spring was most fatal to the children. All deaths being 100, those in spring would be 30·8; winter, 27·7; summer, 27·1; autumn, 14·3. Out of hospitals, in a general population, it was greatest in winter.

3. The abuse of the recumbent position of infants, and want of exercise, was then dwelt upon at length, and M. Hervieux's experience quoted to show the fatal effects of it.

4. Dr. Routh then proceeded to show that want of breast-milk, including cases of privation, cold, premature debility, atrophy, in a general population, could only account for a mortality of 3·6 per cent. per annum in 100 births. That therefore this influence was greatly exaggerated, particularly as M. Benoiston de Chateaunef had shown that the mere substitution of a hired wet-nurse's for a mother's milk increased the mortality 10·6 per cent.

Dr. Routh concluded by giving the result of his experience, as confirmatory of these views, in two institutions to which he was attached, specially insisting on the mortality from atrophy, diptheritis, and diarrhœa. The effect of different kinds of diet on mortality he reserved for a second paper.

Dr. Webster said that the mortality in foundling hospitals was so great that they should not be founded or patronised by any government. This great mortality was owing to several causes, amongst which was the want of breast-milk, the bad mode of feeding, and the swathing of the children up like mummies.

Dr. Chowne remarked, that to make the comparative statistics of town and country valuable, many circumstances besides the mere number of deaths must be taken into consideration, such, for instance, as the food employed, the care taken of the children, etc. The mortality in the London Foundling Hospital had much decreased of late years, in consequence of breast-milk having been substituted for artificial diet. But the congregation of many children together must be injurious, as was also the recumbent position in which children in some hospitals were placed. Many children of wet-nurses died whilst their mothers were suckling the offspring of others. This mortality often arose not only for the want of the natural support, but from the absence of the mothers' care, nursing, etc.

Mr. Hunt attributed the diminished mortality of children in the country to the greater purity of the milk, and the absence of alum in the bread.

Dr. Lankester hoped that the paper of Dr. Routh would have an influence in checking the system of collecting a large number of healthy children together in a kind of hospital. Want of breast-milk had less influence on mortality than the want of proper food and care in the management of the children.

Mr. Streeter considered that the great mortality in children brought up by hand arose from the difficulty of obtaining an uniformity in the character of the food administered. In the absence of great intelligence in the nurse, few children so brought up lived. It was a good maxim, that if food given did not agree it should be changed. Generally, the artificial food given was too thick.

Dr. E. Smith remarked, that the substitutes for milk given to young children, as arrowroot, etc., were deficient in those nutritive properties which were found in milk, and hence were a cause of much mortality. Another cause was the bad constitution of many mothers, whose milk was consequently unsustaining.

Mr. Harding observed, that the figures in the paper showed the mortality amongst the entire population. If the population were divided into classes, it would be found that the great mortality was amongst the children of the poor, and not amongst those of the middle and higher classes. The mortality of the children in foundling hospitals bore comparison only with the poor, who were deprived of the advantages of proper care in their bringing up.

Dr. Routh, in reply, stated that he had not in his paper entered into some of the points discussed, but had confined it within certain limits. He had avoided entering into the question of the influence of diet, as that would form the subject of a separate paper.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

In these lists, an asterisk is prefixed to the names of Members of the Association.

BIRTHS.

Clapp. On October 18th, at 22, Orchard Street, Portman Square, the wife of W. J. Clapp, Esq., Surgeon, of a son.

Dobson. On October 24th, at Highbury, the wife of W. Coyle Dobson, Esq., Surgeon, of a son.

Gunning. On October 24th, at Cloughton, near Scarborough, the wife of Henry James Gunning, Esq., Surgeon, of a son.

Leslie. On October 18th, at Alton, Hants, the wife of *L. Leslie, M.D., of a son, stillborn.

Mackie. On October 8th, at Insch, Aberdeenshire, the wife of *George Mackie, M.B., of a daughter.

MARRIAGES.

Fernie—Murphy. *Fernie, Andrew, Esq., of Wellingborough, Northamptonshire, to Sophia, youngest daughter of the late Richard Murphy, Esq., of Claremont Row, Islington, on October 21st.

Rooke—Shipton. Rooke, Thomas Morley, M.D., of Scarborough, to Mary Ellen, second daughter of James Shipton, Esq., of Wolverhampton, on October 13th.

DEATHS.

Coleman, John, jun., Esq., Surgeon, at Dover, aged 38, on October 26th.

Jeffery. On October 25th, at Jerington Place, Arthur, infant son of G. A. Jeffery, Esq., Surgeon, of Eastbourne, Sussex.

Lichtenstein, Dr., Professor of Natural History in the University of Berlin, and Director of the Geological Museum in that city, lately.

Rognetta, Dr., at Naples, lately.

APPOINTMENTS.

Acland, Henry W., M.D., F.R.S., elected, by Convocation, Clinical Professor in the University of Oxford, in the room of the late *J. A. Ogle, M.D. Dr. Acland was opposed by Dr. Robert Jackson, of Oxford. The numbers of votes were: for Dr. Acland, 470; for Dr. Jackson, 222.

*Adams, William, Esq., elected Surgeon to the Royal Orthopædic Hospital, in the room of the late E. Lonsdale, Esq.

West, James F., Esq., elected Surgeon to the Queen's Hospital, Birmingham.

HEALTH OF LONDON:—WEEK ENDING OCTOBER 24TH, 1857.

[From the Registrar-General's Report.]

The total number of deaths registered in London in the week that ended on Saturday (October 24th), is 988. In the corresponding weeks of ten previous years, 1847-56, the average number was 1002. The same rate of mortality in the present increased population would produce 1102 deaths; and a comparison of the real with the estimated result shows a difference in favour of last week to the extent of 114.

Whilst the population of the metropolis lost 988 lives last week, the registration of births shows that 1582 children were born; sufficient to supply the places of the dead, and to increase the number of inhabitants by 594.

The deaths of 476 males and 512 females were registered. 231 boys and girls died before completing their first year; at the other extreme of life, 26 men and women died who were 80 years old and upwards. Two aged persons, both widows, one in Paddington, the other in St. Luke's, attained the respective ages of 93 and 96 years.

The deaths from diarrhœa, which numbered 79 in the first week of October, fell last week to 42, about the average of former years; of that number, 27 occurred to children under five years of age.

Six deaths from cholera and choleraic diarrhœa were registered last week. At 19, Asylum Terrace, Chelsea, a boy, aged 11 months, died of "cholera infantum" (62 hours). At 10, Duke Street, Old Artillery Ground, Whitechapel, a boy, aged six years, died of "choleraic fever" (14 days). At 3, Nelson's Court, Limehouse, a boy, aged nine months, died of "cholerine" (7 days). At 2, Mast House Place, Mill Wall, Poplar, a man, aged 77 years, died of "Asiatic cholera" (5 days), collapse (2 days), secondary fever (3 days). At 8, Aldred Street, Bermondsey, a man, aged 39 years, died of "choleraic diarrhœa"; and at Hill House, Gordon Road, Peckham, a girl, aged 8 months, died of "choleraic diarrhœa". Typhus was fatal to 54 persons, 29 of whom were under 20 years of age; 21 children died of measles, 50 of scarlatina, and 27 of hooping-cough. At 17, George Terrace, Brook Street, Upper Clapton, a man, aged 37 years, died of fever (3 weeks). The registrar adds: "this is the second death from typhus fever in Brook Street, and there are eight or nine other cases of fever."

Last week the births of 814 boys and 768 girls, in all 1582 children, were registered in London. In the ten corresponding weeks of the years 1847-56, the average number was 1475.

The registrar of the West Ham sub-district, which adjoins London, reports:—"No fresh case of cholera or of death has occurred in my district during the week."

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·638 in. The highest reading was 29·974 in., which occurred on Saturday; the lowest was 29·414 in., which occurred on Sunday. The mean temperature of the air was 51·5°, which is 2·7° above the average of the same week in 43 years (as determined by Mr. Glaisher). The lowest temperature in the week was 42·7°, on Thursday. The wind was variable during the week; but the north-east winds prevailed. On Thursday, the wind blew from the north and north-north-east, while heavy rain fell continuously during the whole day, making the total fall at 9 P.M., 2·57 in. The average annual fall of rain in London during the seventeen years 1840-56, was 24 in.; consequently, more than a tenth part of the average fall of rain in 365 days fell on Thursday last. The fall of rain on an acre was 58,140 gallons, or rather more by weight than 259 tons. As the area of the London districts is 78,029 acres, the fall of rain on the whole surface, if the average rainfall be assumed to be represented by the Greenwich Observation, exceeded twenty million tons, or eighty-four million hogsheads. Now the question of the drainage of London is under consideration, these facts will no doubt attract the attention of engineers.

ELECTION OF SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

At a meeting of the Council of Queen's College, held on Wednesday, October 14th, the Rev. Chancellor Law in the Chair—the Mayor of the Borough, the High Bailiff of the Manor, the Dean of the Faculty, the Rev. Dr. Miller, Professors Drs. Birt Davies and Heslop, F. I. Welch and T. Bagnall, Esqrs., Messrs. E. T. Cox, Armfield, Boucher, Taylor, Cliff, and Haines, being present—the following Report from the Professors was presented:—

"The Professors in Medicine and Surgery of the Queen's College at Birmingham, having been requested by the Council to report on the testimonials of the candidates for the office of Surgeon to the Queen's Hospital, specifying the names of such candidates as in their judgment are qualified and eligible, and in their opinion best fitted to fill the vacant appointment, and the grounds of their recommendation, have to report that six applications have been received; namely, from—

"Mr. Joseph Sampson Gamgee, Staff-Surgeon of the First Class, principal Medical Officer of the British Italian Legion during the war, late Assistant-Surgeon to the Royal Free Hospital, London, House Surgeon and Ophthalmic Surgeon's Assistant at University College Hospital.

"Mr. Benjamin Hunt, late House Surgeon of University College Hospital, late Resident Physician's Clinical Assistant at the Hospital for Consumption at Brompton, late House Surgeon to the Kent County Hospital for Diseases of the Eye and Ear, and late Medical Officer of the Queen's Hospital.

"Mr. Thomas Furneaux Jordan, late Resident Surgeon of the Warneford Hospital and Bathing Institution, Leamington, and Junior Anatomical Demonstrator at Queen's College.

"Mr. Henry Lakin, Surgeon to the General Dispensary, late Assistant-Surgeon *Dreadnought* Hospital Ship, Greenwich, late Assistant-Surgeon Smyrna Hospital and General Hospital before Sebastopol.

"Mr. James William Moore, Surgeon in the Bombay Army, Honourable East India Company's Service, late Resident Medical Officer of the Queen's Hospital.

"Mr. James F. West, late Resident Medical Officer of the Queen's Hospital.

"That after mature and careful examination of the testimonials of the respective candidates, the Professors report that all the candidates are both qualified and eligible.

"That in their judgment, Mr. Joseph Sampson Gamgee appears best fitted for the appointment, on the following grounds:—

"That he was a most distinguished student of University College, London, and obtained, as evidence of his abilities, no less than five gold medals in the various sciences of anatomy, physiology, surgery, clinical medicine, and clinical surgery.

"That he discharged the responsible duties of Resident House Surgeon at University College Hospital, and also those of the Ophthalmic Surgeon's Assistant, to the satisfaction of the surgical staff and the governors at large.

"That for a period of two years he availed himself of the vast field of study afforded in the hospitals, dissecting-rooms, and in the museums of the continent, and obtained such a reputation for industry, ability, and skill, as to warrant the strong testimonials of such men as the Baron Larrey, surgeon to the Emperor Napoleon, of M. Bonnet, Professor of Clinical Surgery in the Hôtel Dieu of Lyons, of Carlo Burci, Professor of Surgery in the University of Pisa, of M. Velpeau, member of the French Institute, who says—'My personal knowledge of you, the zeal of which you have given proof in our hospitals, your published writings, warrant me in affirming that you have all the intelligence, all the learning, and all the aptitude requisite for an excellent hospital surgeon, and that science will find in you a worthy representative'—and of many other eminent surgeons in France and Italy.

"That Mr. Gamgee was appointed to organise the medical staff and superintend the hospitals of one of the British Foreign Legions in the late war, the onerous duties of which position were so fulfilled by him, that the Minister of War, the Director-General of the Army Medical Department, his Excellency Sir James Hudson, and others, expressed their opinions of his public services in high terms.

"In addition to the recommendation of the distinguished individuals above referred to, testimonials are submitted to the Professors in favour of Mr. Gamgee from many of the most distinguished medical men of this country; one of these, from Professor Paget, F.R.S., of London, is thus expressed:—'He (Mr. Gamgee) is a gentleman not only of great natural ability, but of surpassing activity and enterprise. How good a surgeon he is, he has proved by his numerous works, and by the reputation he has gained in every post he has filled; how able to teach others, the energy and clearness with which he speaks and writes, will abundantly testify; how skilled in extending and improving surgical science, his constant zeal in new and laborious inquiries has long established.'

"As an author, Mr. Gamgee is favourably known to the profession by his works on Pathological Anatomy and Clinical

Surgery, and on the Treatment of Fractures by the Starched Apparatus, and also by numerous papers on scientific subjects in medical periodicals.

"In conclusion, it may not be irrelevant to state that Mr. Gamgee is within a few months of thirty years of age."

After some discussion, the Council proceeded to a vote, which resulted in the election of Mr. J. F. West, by a majority of *one*.

THE WATERLOO BRIDGE MURDER.

The adjourned inquest on the body found on an abutment of Waterloo Bridge was concluded on Monday last.

Mr. R. B. Painter, divisional surgeon to the F division of police, in his last evidence before the Court, gave a short outline of the main features of the case under investigation; but there were one or two points which he had omitted to notice, and which he should like now to supply. He had made a further examination of the remains of the deceased, and on the ramus of the right ischium he found a small portion of the corpus cavernosum. He had placed the portions in an antiseptic solution; but before doing that, he separated a portion of muscles with some saline particles, and, placing them in a bottle, retained them carefully in his own immediate possession. That bottle, with its contents, he had since handed to Dr. Taylor for analysis, with whom he had been associated in examining the remains subsequent to the last inquisition.

Dr. A. S. Taylor, to whom the examination of the body had been entrusted, read the following report:—

"I made an examination of these remains on three separate occasions—viz., on the 18th, 19th, and 21st of October. They were shown to me on each occasion by the divisional surgeon, Mr. Painter, in the presence of Inspector Durkin. These remains are parts of a human body, and, making some allowance for the missing portions, they admit of an accurate adjustment to each other. Twenty-three pieces of the body were shown to me, consisting chiefly of bones with the flesh adhering to them. The flesh had been roughly cut from the bones, apparently with the view of removing as much of it as possible; and the parts had been cut and sawn into small lengths, probably to reduce their bulk, and to allow them to be packed within a small space. The trunk, including part of the chest and spine, has been cut into eight pieces; the upper limbs have been cut or sawn into six, and the lower limbs into nine pieces. The deficient portions are the head, with the greater part of the spine—namely, fourteen out of twenty-four vertebra (seven cervical and seven upper dorsal), the hands, the feet, and some portions of the left side of the chest. The whole of the viscera of the chest and abdomen are also deficient. When compared with the average weight of the body, the quantity found is small. The twenty-three pieces produced, after soaking in brine for some days, weighed only 18 lb. This is about one-eighth of the average weight of the adult body.

"These remains have been examined especially with a view to the solution of the following questions:—

"1. The sex, age, and stature of the deceased.

"2. The presence of any physiological or pathological peculiarities in reference to identity.

"3. The presence of any marks of violence with reference to the probable cause of death.

"4. The general condition of the remains, with a view to determine whether they are parts of a dissected body, and whether they had undergone any chemical process for the purpose of preservation.

"5. The length of the period which has elapsed since the death of the deceased.

"I. *Sex and Stature of Deceased.* It is unnecessary to deal with a question sometimes raised on these occasions, whether the remains, or any of them, are those of an animal. Beyond all doubt, they are parts of a human body, and there are no duplicate portions, such as are commonly found when bodies have been used for the lawful purposes of dissection. The parts found belong to one and the same body. The sex is also placed beyond all doubt. The length and massiveness of the bones of the upper and lower limbs, the marked characters of the ridges and processes, the form of the pelvis, the dimensions of the part called the inlet, the narrowness of the space in the arch of the pubis, clearly indicate that the deceased was of the male sex. This is confirmed by the remains of a portion of the anatomical structure of the male still adhering to the arch of the pubis on the right side. An attempt has obviously been made to destroy all traces of the sex; and this, so far as the soft parts are concerned, has been effected on one side of the arch of the pubis, but not on the other. These sexual parts have not been dissected, but rudely mutilated, and irregularly cut on the two sides after death. The firmness, solidity, size, and weight of the bones, the complete ossification of the ends of the long bones, and the thickness of the shafts of the thigh-bones, compared with the space occupied by the medullary cavities, are in a condition which show that the deceased had reached a full adult age, which I would assign presumptively, judging from the appearance of the skeleton, at from 30 to 40 years.

"I. *Physiological or Pathological Peculiarities.* The bones presented in no part marks of malformation, disease, united fractures, or mechanical injury, excepting that which had been produced after death by sawing. Some of the joints were fixed with the sawn portions of the bones in an unusual direction. The head of the right thigh-bone remaining on the hip-joint was flexed or bent on the trunk at an angle of 45 deg.; the knee was also firmly flexed on this side, at an angle with the thigh. The left arm was fixed in such a direction as to be widely separated from the left side of the body, instead of lying parallel to it; and on this side the forearm was firmly bent on the arm at the elbow-joint, at an angle of 45 deg. On the right side, viewing the direction of the bones, as fixed by the portions left in the joints, the forearm was bent on the upper arm at an angle of 80 deg. On examining the joints, it was found there was no ossification or other disease to account for this firmly fixed condition of the upper or lower limbs on the right side, and the upper limb on the left side. So I infer from this examination that the limbs had not been relaxed since they had undergone the rigidity of death; that the body had been cut and sawn while in this rigid state; and that the mode in which it was subsequently treated, to which I shall presently refer, tended to preserve the fixed condition of the joints, as a result of cadaveric rigidity in a constrained posture. The small portions of skin remaining on the wrist and on the right knee are rather thickly covered with long dark hair.

"III. *Marks of Violence.—The Cause of Death.* The cutting and sawing of these remains took place after death. The cutting has been effected roughly with a knife, while the sawing has been performed in the shafts of the long bones with a fine saw. In one portion of the left side of the chest, comprising the second, third, and fourth ribs, with one half of the chest bone attached, there is an aperture in the flesh presenting the appearance of a stab. It is situated in front, between the third and fourth ribs, near their junction with the chest bone. It has penetrated the cavity of the chest, and presents, as seen from the inside, an opening of about six-tenths of an inch in its longest axis, which is obliquely placed, but inclined to a vertical direction. Assuming that this wound had been inflicted during life, it would have penetrated the heart, and have produced rapid, if not immediate death. The muscles of the chest through which this stab had passed were for some space around of a dark red colour, evidently produced by blood which had been effused as a result of this wound. This appearance is unlike that produced by a cut or stab in a cold dead body in which circulation has ceased. The edges of the wound are everted, and this fact, together with the infiltration of the muscles with blood, which even the soaking in liquid for a week had not removed, lead me to the conclusion that this wound was inflicted on the deceased either during life or within a few minutes of death—*i.e.*, while the body was warm and the blood was liquid. There is no other mark of violence during life, or any other appearance in the remains which points to a cause of death. The deceased may have actually died from a fracture to the skull and injury to the brain, or from a stab in the abdomen affecting some large bloodvessel. As the organs of the chest and abdomen are not forthcoming, any opinion on the cause of death must be a matter of speculation. The ribs and muscles of the right side of the chest (which are complete in three pieces), when placed together and examined present no marks of stabbing or fracture; any mortal wound on the chest, therefore, must have been on the left side. The first, fifth, and sixth ribs, with their attached muscles, are wanting on this side. There may have been stabs in the spaces between these missing ribs which would have involved the large bloodvessels of the chest or the heart itself.

"IV. *General Condition of the Remains.* The portions of the twenty three pieces of the body presented no appearance of having undergone dissection for the purposes of anatomy. The muscles, bloodvessels (which were not injected), and the nerves had been cut through in all directions without any reference to relative positions, or the respective courses of the

vessels and nerves. The spinal marrow had been violently torn out of the vertebral canal, and left hanging by its sheath to the vertebræ. The joints had been sawn through, evidently with great trouble, at points where a scalpel in the hands of even a young anatomist would have speedily effected a separation of the limbs. The acromion process of the right scapula or bladebone had been sawn through in order to remove the shoulder. The right clavicle was left attached to the upper rib on that side; the sternum, or chest bone, was sawn in a right line through its centre, while the cartilages of the remaining ribs, which are always cut for the convenient examination of the chest, were uncut. The left scapula or bladebone had been roughly sawn through, so as to leave the cavity of the shoulder-joint, with the neck of the bladebone still attached to the head of the humerus, or long bone of the arm; and the ribs and processes of the vertebræ of the spine were sawn and cut without reference to their anatomical bearings. The pelvis was sawn into two pieces through the centre of the sacrum. In short, the clearest examination, coupled with the knowledge derived from an experience of seven years spent in the study of anatomy by dissections, leads me to the conclusion that these remains have not been employed for any anatomical purpose whatever. On the contrary, I believe that, from the period at which the rigidity of death took place they have been rendered utterly useless for any such purpose. The flesh left upon the bones was brittle and of a brownish colour. A portion of this, as removed from the bones soon after their discovery, was delivered to me by Mr. Painter, and I made a chemical examination of it in his presence. It had not undergone putrefaction, and had the smell of salted muscle. It was submitted to analysis for the detection of those substances which are used for the preservation of animal matter—namely, arsenic, corrosive sublimate, common salt, nitre, alumina, and chloride of zinc, with the result that the only substance present was common salt. This was separated from the muscular fibre, and obtained in a crystalline state. The thicker portion of the flesh remaining on the bones of the pelvis, when cut into, was of a slightly reddish tint. This red tint was probably partly owing to the effects of salting. The superficial portion of flesh in the remains presented a brownish colour, and softened and corrugated appearance, produced by exposure to boiling water. The ligaments, tendons, the exposed portions of cartilage of the joints, and the skin on the wrists and right knee, presented such appearances as exposure to boiling water for a short period would alone account for or explain. The cuticle of the skin, which was not in a state of putrefaction, could be peeled off. The bare skin itself was swollen, gelatinous-looking, and curved inwards at the margin where the feet had been removed from the cellular membrane beneath. Such would be the effect produced by boiling water. An examination of the swollen shafts of the long bones clearly shows that the marrow has been melted out and removed by boiling water from the medullary cavities at each exposed extremity. The boiling has not been continued for a length of time, since the deep-seated portions of the muscles do not show the changes which would have otherwise been produced in them, and the marrow is not removed from the centre of the long bones. The divided ends of the arteries, and the divided portion of the spinal marrow with its sheath, also show such effects as boiling water would produce. The cut portions of the arteries are opaque, hardened, and averted.

"To this exposure to the action of boiling water, while the separate portions of the body were in a state of cadaveric rigidity, I attribute the peculiar fixation of the thigh, knee, and arms in a flexed or bent condition. The ligaments appear to have contracted as a result of the action of hot water, and thereby to have retained the same portions of bone, remaining on the joints in the position which they had acquired as the result of rigidity. The appearances are such as are produced by boiling water on dead animal matter. There is nothing to show that boiling water has acted on any living structure, while it is obvious, from the effects produced on the sawn bones, ligaments, and arteries, that the body must have been cut up before the parts were exposed to boiling temperature. It is my opinion that the remains were exposed to boiling water before they were salted. In reference to the portion of flesh which I examined, the salt was in such quantity that it was easily dissolved from the outside by cold distilled water; and I am confirmed by Mr. Painter that when first examined by him parts of flesh presented solid gritty particles like salt. These facts lead to the inference that the salting took place after the partial boiling of the remains; the object of these two operations being probably the same—namely, to prevent putrefaction, and the probable discovery of the remains by the escape of putrescent effluvia. The piece of flesh which I examined, as taken from the remains by Mr. Painter, had no offensive smell whatever, although he had kept it for a period of eight days.

"5. *Period since Death.* On this point only a speculative opinion can be given. As the remains have been partly boiled and salted, those changes in the animal matter on which we are accustomed to rely for evidence of the period of death have been suspended. Still, an examination of the deep-seated parts of the flesh and of the right hip joint, which had not been opened or disturbed until the 21st inst., has led me to the conclusion that the person of whose body these remains were a part may have been dead three or four weeks prior to that date. This would carry the probable time of death to the last week in September or to the first week in October. The period may have been shorter than this—that is, that death may have taken place more recently; but, considering that the weather during that time was mild, humid, and favourable to putrefaction, I do not think that it was longer. Had death occurred at a more remote period, I should have expected to find some visible changes indicative of putrefaction in the interior of the right hip joint and on the deep-seated portions of flesh on the bones around the joint.

"*Conclusions.* The conclusions which I draw from this examination are—

"1. That the remains are those of a person of the male sex, of adult age, and in stature of at least five feet nine inches.

"2. That they present no physiological or pathological peculiarities by which they can be identified. The only fact observable under this head is that the portions of skin remaining are thickly covered with dark hairs on the wrist and right knee, and that the deceased was therefore probably a dark hairy man.

"3. That the remains present no mark of disease or of violent injury inflicted during life, with the exception of one stab in the space between the third and fourth ribs on the left side of the chest. This stab was in a situation to penetrate the heart and to cause death. It presents the characters of a stab inflicted on a person either living or recently dead.

"4. That these remains have not been dissected or used for the purposes of anatomy. All those parts which are useful to the anatomist have been roughly severed and destroyed by a person or persons quite ignorant of the anatomical relations of parts. They have been cut and sawn before the rigidity of death had ceased; *i. e.*, in from eighteen to twenty-four hours after death, and in this state have been partially boiled and subsequently salted. The body of the deceased has not been laid out or attended like that of a person dying from natural causes, whose body might be lawfully used for anatomical purposes.

"5. That the person of whose body these remains are a part may have been dead for a period of three or four weeks prior to the date at which they were examined by me—namely, on the 21st of October.

"*Report on Certain Articles of Clothing found with the Remains.* On Monday, October 19th, and on Wednesday, October 21st, various articles of clothing, stated to have been found in a carpetbag with the remains, were shown to me by Superintendent Durkin, at the Bow Street Police-Station, in the presence of Mr. Painter.

"Overcoat.—The lining of the left sleeve in the armpit is much stained with blood. It appears to have collected there. The right sleeve is cut or torn up in its length. On the collar behind and towards the left side there is a cut or stab, as from a double-edged knife.

"Under-coat (frock-coat).—This is completely cut up the back from behind, and in the hollow corresponding to the left armpit there is a deep stain of blood. On the left side of the collar behind is a stab or cut, as from a double-edged knife, apparently corresponding to the cut on the collar of the overcoat.

"Waistcoat.—This is torn up the back. There are stains on the left side from blood (inside), apparently diffused by wetting. On the top of the collar behind there is a cut or stab as from a double-edged knife, corresponding in form and direction to the cuts in the collars of the over and under-coats. In the waistcoat this cut was found to be in its long axis five-eighths of an inch in length.

"Trousers.—These are torn up at the back. There is no appearance of blood inside or outside. There are some stains of dirt and other matters.

"Shirt.—The right sleeve is torn up. On the left side in

front there are eight cuts or stabs, corresponding in number and apparently in situation to cuts or stabs in the under-shirt. There was no appearance of blood about these cuts, either inside or outside; but the front of the shirt, at the upper part, presented a generally diffused redness, such as would be produced by blood diluted with water.

"Under-shirt (merino).—This is torn in its length at the side and behind. On the left side, and in front, there were eight cuts or stabs near to each other, leaving the long axis upwards and a little slanting. The largest of these was three-quarters of an inch in its long axis, and the smallest one and a quarter of an inch. There were no marks of blood about these cuts either inside or outside; but the shirt was much stained with blood just above them, both inside and outside, in a direction towards the left shoulder. The blood appeared diffused, as if by wetting, except under one of the buttons, where it had coagulated, as it does when it issues from the body of a living person. There was also much blood (diffused) on the wrist of the left sleeve.

"The Drawers.—These were cut up the back. There was a diffused stain of blood on the right side. In the waist, in front, there was a puncture or stab, about three-eighths of an inch in its greatest length, such as would be produced by a sword cane. This apparently corresponded to apertures in the trousers and on the shirt.

"The Socks.—One of these presented on the inside diffused marks of blood. On one there was a distinct spot of blood near the toes.

"Half of a Black Satin Necktie.—There was a slight reddish stain on the lining.

"*Conclusion.* The examination of these articles of clothing leads me to the conclusion that the body of the person who wore them must have been subjected to great violence. The stab penetrating from behind the double collar of the overcoat must have been inflicted with great force, as it extends through the collar of the undercoat and waistcoat. It is chiefly on the inside and on the left side, towards the left armpit, that the principal stains of blood are met with in the overcoat, undercoat, and waistcoat. The only wound found in the remains is a stab on the left side, which, by its situation, might have led to the effusion of blood. Assuming that the clothes belonged to the deceased, these facts appear to receive an explanation. The clothes have, however, been exposed to wet since they were stained with blood, and this creates a difficulty in forming an opinion. The cutting and tearing of the coat, trousers, and drawers at the back, and the cutting and tearing of the right sleeves of the overcoat, undercoat, and shirt, are consistent with the assumption that the body had become rigid after death in a distorted position, and that the clothes were violently torn from it. This position is indicated in the remains, especially on the right side by the flexed or bent condition of the hip and elbow joints. Some of the stains of blood present the appearance of having flowed from a living person, and this renders it therefore probable that the clothes were on a living body when the wounds producing such effusion of blood were inflicted. While there is nothing to prove directly that these clothes were worn by the deceased, they have, in my opinion, been worn by some one who has sustained serious personal injuries. Their condition, however, is consistent with the supposition that they were actually worn by the deceased individual with whose remains they were found.

"Alfred S. Taylor, M.D., F.R.S.

"15, St. James's Terrace, Regent's Park, Oct. 3rd."

Dr. Warlomont, the eminent ophthalmic surgeon of Brussels, and editor of the *Annales d'Oculistique*, has been nominated knight of the orders of Francis the First of Naples, and of Saints Maurice and Lazarus of Sardinia.

The Serjeant-Surgeoncy. We learn that Benjamin Travers, Esq., F.R.S., has just been appointed Serjeant-Surgeon to the Queen, in the vacancy occasioned by the decease of Robert Keate, Esq. It was generally expected that the honour would have been conferred on a younger member of the profession; but the public will be gratified by the selection now made.

TO CORRESPONDENTS.

Anonymous Correspondents should always enclose their names to the Editor; not for publication, but in token of good faith. No attention can be paid to communications not thus authenticated.

Members should remember that corrections for the current week's Journal should not arrive later than Wednesday.

The Report of the Birmingham and Midland Counties Branch shall appear next week.

Communications have been received from:—Mr. J. S. Gamgee; Dr. David Nelson; Dr. Handfield Jones; Dr. R. U. West; Dr. Ranking; Dr. Cockle; Dr. H. Vernon; Mr. Michael; Mr. W. Parker; Dr. J. Williams; Mr. Stone; Mr. T. Holmes; Dr. P. H. Williams; Dr. Day; Mr. J. V. Solomon; Mr. Blower; Mr. J. Audland; Mr. J. H. Brown; Dr. Drage; Dr. J. H. Stallard; Dr Fraser (10th Hussars); Dr. E. Hodges; Dr. Treffry; Mr. Prichard; Mr. J. C. M. Thomas; Dr. Fuller; A Roman Catholic Associate; Dr. S. T. Chadwick; Mr. A. B. Steele; and Mr. J. K. Spender.

BOOKS RECEIVED.

[* *An Asterisk is prefixed to the names of Members of the Association.*]

1. On Plastic Operations for the Restoration of the Lower Lip, and for the Relief of several Deformities of the Face and Neck. By *Thomas P. Teale. London: Churchill. 1857.
2. A Manual of Medical Diagnosis; being an Analysis of the Signs and Symptoms of Disease. By A. W. Barclay, M.D. London: Churchill. 1857.
3. The Chemistry of Wine. By J. G. Mulder, Professor of Chemistry in the University of Utrecht. Edited by H. Bence Jones, M.D., F.R.S. London: Churchill. 1857.
4. Archives of Medicine. Edited by Lionel S. Beale, M.B., F.R.S. No. I. London: Churchill. 1857.

ADVERTISEMENTS.

Microscope. — Elementary Course of EIGHT LECTURES on the Use of the Instrument; Examination and Preparation of Specimens, etc., on Wednesday Evenings, at Eight o'Clock, by Prof. LIONEL BEALE, M.B., F.R.S., at 27, Carey Street, Lincoln's Inn, W.C. First Lecture on November 4th. Fee, £1 : 11 : 6. A Syllabus will be sent on application.

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